

```
1 /usr/local/bin/python3.12 /Users/nimanshendlay/
  Desktop/scrabble_v0/tournament.py
2
3 A module that was compiled using NumPy 1.x cannot
  be run in
4 NumPy 2.1.1 as it may crash. To support both 1.x
  and 2.x
5 versions of NumPy, modules must be compiled with
  NumPy 2.0.
6 Some module may need to rebuild instead e.g. with '
  pybind11>=2.12'.
7
8 If you are a user of the module, the easiest
  solution will be to
9 downgrade to 'numpy<2' or try to upgrade the
  affected module.
10 We expect that some modules will need time to
  support NumPy 2.
11
12 Traceback (most recent call last): File "<frozen
  site>", line 614, in <module>
13   File "<frozen site>", line 607, in main
14   File "<frozen site>", line 546, in
    execsitecustomize
15   File "/Users/nimanshendlay/Applications/PyCharm
    Professional Edition.app/Contents/plugins/python-ce
    /helpers/pycharm_plotly_backend/sitecustomize.py",
    line 114, in <module>
16     import sitecustomize
17   File "/Users/nimanshendlay/Applications/PyCharm
    Professional Edition.app/Contents/plugins/python-ce
    /helpers/pycharm_matplotlib_backend/sitecustomize.
    py", line 43, in <module>
18     import matplotlib
19   File "/Library/Frameworks/Python.framework/
    Versions/3.12/lib/python3.12/site-packages/
    matplotlib/__init__.py", line 161, in <module>
20     from . import _api, _version, cbook, _docstring
    , rcsetup
21   File "/Library/Frameworks/Python.framework/
    Versions/3.12/lib/python3.12/site-packages/
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21 matplotlib/rcsetup.py", line 27, in <module>
22     from matplotlib.colors import Colormap,
23     is_color_like
23   File "/Library/Frameworks/Python.framework/
24   Versions/3.12/lib/python3.12/site-packages/
24   matplotlib/colors.py", line 57, in <module>
25     from matplotlib import _api, _cm, cbook, scale
25   File "/Library/Frameworks/Python.framework/
26   Versions/3.12/lib/python3.12/site-packages/
26   matplotlib/scale.py", line 22, in <module>
27     from matplotlib.ticker import (
27   File "/Library/Frameworks/Python.framework/
28   Versions/3.12/lib/python3.12/site-packages/
28   matplotlib/ticker.py", line 143, in <module>
29     from matplotlib import transforms as
29     mtransforms
29   File "/Library/Frameworks/Python.framework/
30   Versions/3.12/lib/python3.12/site-packages/
30   matplotlib/transforms.py", line 49, in <module>
31     from matplotlib._path import (
31 Traceback (most recent call last):
32   File "/Library/Frameworks/Python.framework/
33   Versions/3.12/lib/python3.12/site-packages/numpy/
33   core/_multiarray_umath.py", line 44, in __getattr__
33     raise ImportError(msg)
34 ImportError:
35 A module that was compiled using NumPy 1.x cannot
35 be run in
36 NumPy 2.1.1 as it may crash. To support both 1.x
36 and 2.x
37 versions of NumPy, modules must be compiled with
37 NumPy 2.0.
38 Some module may need to rebuild instead e.g. with '
38 pybind11>=2.12'.
39
40 If you are a user of the module, the easiest
40 solution will be to
41 downgrade to 'numpy<2' or try to upgrade the
41 affected module.
42 We expect that some modules will need time to
42 support NumPy 2.
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43
44
45 /Users/nimanshendlay/Applications/PyCharm
    Professional Edition.app/Contents/plugins/python-ce
    /helpers/pycharm_display/datalore/display/
    supported_data_type.py:6: UserWarning: The NumPy
        module was reloaded (imported a second time). This
        can in some cases result in small but subtle issues
        and is discouraged.
46     import numpy
47
48 Playing matches between Greedy AI and Adversarial
    AI
49
50 Game 1/5
51 Greedy AI starts the game!
52 Greedy AI plays 'li' at (7, 7) across for 2 points!
53 Greedy AI chooses to play 'wist' at (5, 9) (down)
    for 18 points
54 Greedy AI plays 'wist' at (5, 9) down for 18 points
    !
55 Adversarial AI chooses to play 'rod' at (4, 10) (
    down) for 16 points
56 This move limits opponent's maximum potential score
    to 18 points
57 Adversarial AI plays 'rod' at (4, 10) down for 16
    points!
58 Greedy AI chooses to play 'loft' at (8, 6) (across
    ) for 23 points
59 Greedy AI plays 'loft' at (8, 6) across for 23
    points!
60 Adversarial AI chooses to play 'imino' at (9, 2) (
    across) for 11 points
61 This move limits opponent's maximum potential score
    to 20 points
62 Adversarial AI plays 'imino' at (9, 2) across for
    11 points!
63 Greedy AI chooses to play 'fag' at (10, 4) (across
    ) for 30 points
64 Greedy AI plays 'fag' at (10, 4) across for 30
    points!
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- 65 Adversarial AI chooses to play 'woo' at (5, 9) (across) for 6 points
- 66 This move limits opponent's maximum potential score to 17 points
- 67 Adversarial AI plays 'woo' at (5, 9) across for 6 points!
- 68 Greedy AI chooses to play 'word' at (2, 12) (down) for 24 points
- 69 Greedy AI plays 'word' at (2, 12) down for 24 points!
- 70 Adversarial AI chooses to play 'doux' at (3, 11) (across) for 40 points
- 71 This move limits opponent's maximum potential score to 36 points
- 72 Adversarial AI plays 'doux' at (3, 11) across for 40 points!
- 73 Greedy AI chooses to play 'yurta' at (5, 13) (down) for 38 points
- 74 Greedy AI plays 'yurta' at (5, 13) down for 38 points!
- 75 Adversarial AI chooses to play 'rax' at (1, 14) (down) for 10 points
- 76 This move limits opponent's maximum potential score to 15 points
- 77 Adversarial AI plays 'rax' at (1, 14) down for 10 points!
- 78 Greedy AI chooses to play 'morn' at (7, 11) (across) for 27 points
- 79 Greedy AI plays 'morn' at (7, 11) across for 27 points!
- 80 Adversarial AI chooses to play 'kid' at (6, 8) (across) for 28 points
- 81 This move limits opponent's maximum potential score to 29 points
- 82 Adversarial AI plays 'kid' at (6, 8) across for 28 points!
- 83 Greedy AI chooses to play 'aviate' at (9, 14) (down) for 32 points
- 84 Greedy AI plays 'aviate' at (9, 14) down for 32 points!
- 85 Adversarial AI chooses to play 'huh' at (12, 13) (

85 down) for 32 points
86 This move limits opponent's maximum potential score to 35 points
87 Adversarial AI plays 'huh' at (12, 13) down for 32 points!
88 Greedy AI chooses to play 'apt' at (12, 12) (down) for 33 points
89 Greedy AI plays 'apt' at (12, 12) down for 33 points!
90 Adversarial AI chooses to play 'naevi' at (9, 5) (down) for 10 points
91 This move limits opponent's maximum potential score to 11 points
92 Adversarial AI plays 'naevi' at (9, 5) down for 10 points!
93 Greedy AI chooses to play 'geyser' at (1, 9) (across) for 37 points
94 Greedy AI plays 'geyser' at (1, 9) across for 37 points!
95 Adversarial AI chooses to play 'jape' at (8, 0) (across) for 27 points
96 This move limits opponent's maximum potential score to 32 points
97 Adversarial AI plays 'jape' at (8, 0) across for 27 points!
98 Greedy AI chooses to play 'relieve' at (12, 0) (across) for 22 points
99 Greedy AI plays 'relieve' at (12, 0) across for 22 points!
100 Adversarial AI chooses to play 'acrid' at (10, 0) (down) for 33 points
101 This move limits opponent's maximum potential score to 37 points
102 Adversarial AI plays 'acrid' at (10, 0) down for 33 points!
103 Greedy AI chooses to play 'bins' at (11, 3) (down) for 14 points
104 Greedy AI plays 'bins' at (11, 3) down for 14 points!
105 Adversarial AI chooses to play 'miaou' at (7, 11) (down) for 14 points

- 106 This move limits opponent's maximum potential score to 33 points
- 107 Adversarial AI plays 'miaou' at (7, 11) down for 14 points!
- 108 Greedy AI chooses to play 'erns' at (11, 7) (down) for 26 points
- 109 Greedy AI plays 'erns' at (11, 7) down for 26 points!
- 110 Adversarial AI chooses to play 'bota' at (5, 1) (down) for 12 points
- 111 This move limits opponent's maximum potential score to 14 points
- 112 Adversarial AI plays 'bota' at (5, 1) down for 12 points!
- 113 Greedy AI chooses to play 'zone' at (6, 0) (across) for 14 points
- 114 Greedy AI plays 'zone' at (6, 0) across for 14 points!
- 115 Adversarial AI chooses to play 'bene' at (5, 1) (across) for 10 points
- 116 This move limits opponent's maximum potential score to 8 points
- 117 Adversarial AI plays 'bene' at (5, 1) across for 10 points!
- 118 Greedy AI chooses to play 'alt' at (10, 0) (across) for 8 points
- 119 Greedy AI plays 'alt' at (10, 0) across for 8 points!
- 120 No moves available for Adversarial AI. Skipping turn.
- 121 Greedy AI chooses to play 'go' at (10, 10) (across) for 6 points
- 122 Greedy AI plays 'go' at (10, 10) across for 6 points!
- 123 No moves available for Adversarial AI. Skipping turn.
- 124 No moves available for Greedy AI. Skipping turn.
- 125
- 126 Neither player has any available moves. Game ending.
- 127

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128 --- GAME OVER ---
129 Final Board:
130 -----
131 -----geyser
132 -----w_a
133 -----doux
134 -----r_r--
135 _bene___woody_
136 zone___kid__u_
137 _t_____lis_morn
138 jape__loft_i_t_
139 __imino____a_aa
140 alt_fag__go__v
141 c__b_e_e___u__i
142 reliever____aha
143 i__n_i_n____put
144 d_s___s____the
145 Board saved to 'assets/game_output.png'
146
147 Final Scores:
148 Greedy AI: 354 points
149 Adversarial AI: 249 points
150
151 Greedy AI wins!
152
153 Game 2/5
154 Adversarial AI starts the game!
155 Adversarial AI plays 'er' at (7, 7) across for 2
points!
156 Adversarial AI chooses to play 'brrr' at (5, 8) (
down) for 8 points
157 This move limits opponent's maximum potential
score to 16 points
158 Adversarial AI plays 'brrr' at (5, 8) down for 8
points!
159 Greedy AI chooses to play 'agouti' at (0, 9) (down
) for 19 points
160 Greedy AI plays 'agouti' at (0, 9) down for 19
points!
161 Adversarial AI chooses to play 'indoor' at (6, 3
) (across) for 10 points
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- 162 This move limits opponent's maximum potential score to 42 points
- 163 Adversarial AI plays 'indoor' at (6, 3) across for 10 points!
- 164 Greedy AI chooses to play 'ovate' at (7, 0) (across) for 32 points
- 165 Greedy AI plays 'ovate' at (7, 0) across for 32 points!
- 166 Adversarial AI chooses to play 'adroit' at (0, 9) (across) for 24 points
- 167 This move limits opponent's maximum potential score to 30 points
- 168 Adversarial AI plays 'adroit' at (0, 9) across for 24 points!
- 169 Greedy AI chooses to play 'ay' at (1, 8) (down) for 21 points
- 170 Greedy AI plays 'ay' at (1, 8) down for 21 points!
- 171 Adversarial AI chooses to play 'tonemes' at (4, 4) (down) for 36 points
- 172 This move limits opponent's maximum potential score to 21 points
- 173 Adversarial AI plays 'tonemes' at (4, 4) down for 36 points!
- 174 Greedy AI chooses to play 'aloe' at (5, 2) (across) for 14 points
- 175 Greedy AI plays 'aloe' at (5, 2) across for 14 points!
- 176 Adversarial AI chooses to play 'uh' at (3, 9) (across) for 5 points
- 177 This move limits opponent's maximum potential score to 24 points
- 178 Adversarial AI plays 'uh' at (3, 9) across for 5 points!
- 179 Greedy AI chooses to play 'ex' at (8, 5) (down) for 54 points
- 180 Greedy AI plays 'ex' at (8, 5) down for 54 points!
- 181 Adversarial AI chooses to play 'khi' at (2, 10) (down) for 34 points
- 182 This move limits opponent's maximum potential score to 22 points
- 183 Adversarial AI plays 'khi' at (2, 10) down for 34

183 points!

184 Greedy AI chooses to play 'ree' at (0, 11) (down) for 14 points

185 Greedy AI plays 'ree' at (0, 11) down for 14 points!

186 Adversarial AI chooses to play 'ivy' at (0, 13) (down) for 18 points

187 This move limits opponent's maximum potential score to 22 points

188 Adversarial AI plays 'ivy' at (0, 13) down for 18 points!

189 Greedy AI chooses to play 'emeu' at (8, 3) (across) for 11 points

190 Greedy AI plays 'emeu' at (8, 3) across for 11 points!

191 Adversarial AI chooses to play 'sh' at (0, 7) (down) for 22 points

192 This move limits opponent's maximum potential score to 16 points

193 Adversarial AI plays 'sh' at (0, 7) down for 22 points!

194 Greedy AI chooses to play 'abet' at (4, 1) (across) for 15 points

195 Greedy AI plays 'abet' at (4, 1) across for 15 points!

196 Adversarial AI chooses to play 'qaids' at (0, 3) (across) for 25 points

197 This move limits opponent's maximum potential score to 18 points

198 Adversarial AI plays 'qaids' at (0, 3) across for 25 points!

199 Greedy AI chooses to play 'ef' at (1, 4) (across) for 28 points

200 Greedy AI plays 'ef' at (1, 4) across for 28 points!

201 Adversarial AI chooses to play 'veg' at (7, 1) (down) for 11 points

202 This move limits opponent's maximum potential score to 17 points

203 Adversarial AI plays 'veg' at (7, 1) down for 11 points!

204 Greedy AI chooses to play 'outsin' at (2, 14) (down) for 26 points
205 Greedy AI plays 'outsin' at (2, 14) down for 26 points!
206 Adversarial AI chooses to play 'amir' at (10, 3) (down) for 14 points
207 This move limits opponent's maximum potential score to 18 points
208 Adversarial AI plays 'amir' at (10, 3) down for 14 points!
209 Greedy AI chooses to play 'slap' at (3, 0) (across) for 37 points
210 Greedy AI plays 'slap' at (3, 0) across for 37 points!
211 Adversarial AI chooses to play 'duns' at (0, 0) (down) for 15 points
212 This move limits opponent's maximum potential score to 30 points
213 Adversarial AI plays 'duns' at (0, 0) down for 15 points!
214 Greedy AI chooses to play 'fop' at (10, 2) (down) for 34 points
215 Greedy AI plays 'fop' at (10, 2) down for 34 points!
216 Adversarial AI chooses to play 'jo' at (6, 0) (down) for 9 points
217 This move limits opponent's maximum potential score to 16 points
218 Adversarial AI plays 'jo' at (6, 0) down for 9 points!
219 Greedy AI chooses to play 'we' at (8, 0) (across) for 18 points
220 Greedy AI plays 'we' at (8, 0) across for 18 points!
221 Adversarial AI chooses to play 'urn' at (1, 0) (across) for 6 points
222 This move limits opponent's maximum potential score to 20 points
223 Adversarial AI plays 'urn' at (1, 0) across for 6 points!
224 Greedy AI chooses to play 'caws' at (5, 11) (

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224 across) for 17 points
225 Greedy AI plays 'caws' at (5, 11) across for 17
    points!
226 Adversarial AI chooses to play 'zag' at (4, 12) (
    down) for 15 points
227 This move limits opponent's maximum potential
    score to 7 points
228 Adversarial AI plays 'zag' at (4, 12) down for 15
    points!
229 Greedy AI chooses to play 'pic' at (12, 2) (across
    ) for 7 points
230 Greedy AI plays 'pic' at (12, 2) across for 7
    points!
231 Adversarial AI chooses to play 'nom' at (11, 1) (
    across) for 5 points
232 This move limits opponent's maximum potential
    score to 4 points
233 Adversarial AI plays 'nom' at (11, 1) across for 5
    points!
234 Greedy AI chooses to play 'it' at (7, 13) (down)
    for 4 points
235 Greedy AI plays 'it' at (7, 13) down for 4 points!
236 Adversarial AI chooses to play 'el' at (8, 12) (
    down) for 6 points
237 This move limits opponent's maximum potential
    score to 0 points
238 Adversarial AI plays 'el' at (8, 12) down for 6
    points!
239 No moves available for Greedy AI. Skipping turn.
240 Adversarial AI chooses to play 'ern' at (7, 7) (
    across) for 3 points
241 This move limits opponent's maximum potential
    score to 0 points
242 Adversarial AI plays 'ern' at (7, 7) across for 3
    points!
243 No moves available for Greedy AI. Skipping turn.
244 Adversarial AI chooses to play 'let' at (8, 11) (
    across) for 3 points
245 This move limits opponent's maximum potential
    score to 0 points
246 Adversarial AI plays 'let' at (8, 11) across for 3
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246 points!
247 No moves available for Greedy AI. Skipping turn.
248 No moves available for Adversarial AI. Skipping
turn.
249
250 Neither player has any available moves. Game
ending.
251
252 --- GAME OVER ---
253 Final Board:
254 d_qaids_adroit
255 urn_ef_hag_e_v_
256 n_____yoke_yo
257 slap____uh___u
258 _abet____ti_z_t
259 __aloe__bi_caws
260 j_indoor___g_i
261 ovate__ern___in
262 we_emeu_r__let_
263 _g_ex_____l__
264 __fas_________
265 _nom_________
266 __pic_________
267 ___r_________
268 _____
269 Board saved to 'assets/game_output.png'
270
271 Final Scores:
272 Greedy AI: 705 points
273 Adversarial AI: 520 points
274
275 Greedy AI wins!
276
277 Game 3/5
278 Adversarial AI starts the game!
279 Adversarial AI plays 'ae' at (7, 7) across for 2
points!
280 Adversarial AI chooses to play 'dex' at (6, 8) (
down) for 21 points
281 This move limits opponent's maximum potential
score to 17 points
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- 282 Adversarial AI plays 'dex' at (6, 8) down for 21 points!
- 283 Greedy AI chooses to play 'vexil' at (8, 6) (across) for 21 points
- 284 Greedy AI plays 'vexil' at (8, 6) across for 21 points!
- 285 Adversarial AI chooses to play 'nor' at (9, 9) (across) for 11 points
- 286 This move limits opponent's maximum potential score to 16 points
- 287 Adversarial AI plays 'nor' at (9, 9) across for 11 points!
- 288 Greedy AI chooses to play 'weel' at (10, 10) (across) for 28 points
- 289 Greedy AI plays 'weel' at (10, 10) across for 28 points!
- 290 Adversarial AI chooses to play 'eth' at (11, 10) (across) for 30 points
- 291 This move limits opponent's maximum potential score to 28 points
- 292 Adversarial AI plays 'eth' at (11, 10) across for 30 points!
- 293 Greedy AI chooses to play 'caudex' at (3, 8) (down) for 16 points
- 294 Greedy AI plays 'caudex' at (3, 8) down for 16 points!
- 295 Adversarial AI chooses to play 'cargo' at (3, 8) (across) for 16 points
- 296 This move limits opponent's maximum potential score to 29 points
- 297 Adversarial AI plays 'cargo' at (3, 8) across for 16 points!
- 298 Greedy AI chooses to play 'ado' at (2, 11) (across) for 17 points
- 299 Greedy AI plays 'ado' at (2, 11) across for 17 points!
- 300 Adversarial AI chooses to play 'lez' at (4, 12) (across) for 16 points
- 301 This move limits opponent's maximum potential score to 26 points
- 302 Adversarial AI plays 'lez' at (4, 12) across for

- 302 16 points!
- 303 Greedy AI chooses to play 'quag' at (1, 9) (down) for 37 points
- 304 Greedy AI plays 'quag' at (1, 9) down for 37 points!
- 305 Adversarial AI chooses to play 'yett' at (5, 10) (across) for 18 points
- 306 This move limits opponent's maximum potential score to 18 points
- 307 Adversarial AI plays 'yett' at (5, 10) across for 18 points!
- 308 Greedy AI chooses to play 'retook' at (9, 11) (down) for 15 points
- 309 Greedy AI plays 'retook' at (9, 11) down for 15 points!
- 310 Adversarial AI chooses to play 'kabs' at (14, 11) (across) for 30 points
- 311 This move limits opponent's maximum potential score to 23 points
- 312 Adversarial AI plays 'kabs' at (14, 11) across for 30 points!
- 313 Greedy AI chooses to play 'tog' at (11, 9) (down) for 15 points
- 314 Greedy AI plays 'tog' at (11, 9) down for 15 points!
- 315 Adversarial AI chooses to play 'raya' at (3, 10) (down) for 22 points
- 316 This move limits opponent's maximum potential score to 16 points
- 317 Adversarial AI plays 'raya' at (3, 10) down for 22 points!
- 318 Greedy AI chooses to play 'nines' at (14, 5) (across) for 20 points
- 319 Greedy AI plays 'nines' at (14, 5) across for 20 points!
- 320 Adversarial AI chooses to play 'fen' at (12, 7) (down) for 6 points
- 321 This move limits opponent's maximum potential score to 20 points
- 322 Adversarial AI plays 'fen' at (12, 7) down for 6 points!

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323 Greedy AI chooses to play 'jus' at (0, 14) (down)
    for 35 points
324 Greedy AI plays 'jus' at (0, 14) down for 35
    points!
325 Adversarial AI chooses to play 'poi' at (10, 6) (
    down) for 12 points
326 This move limits opponent's maximum potential
    score to 16 points
327 Adversarial AI plays 'poi' at (10, 6) down for 12
    points!
328 Greedy AI chooses to play 'yip' at (10, 4) (across
    ) for 16 points
329 Greedy AI plays 'yip' at (10, 4) across for 16
    points!
330 Adversarial AI chooses to play 'inly' at (7, 4) (
    down) for 7 points
331 This move limits opponent's maximum potential
    score to 16 points
332 Adversarial AI plays 'inly' at (7, 4) down for 7
    points!
333 Greedy AI chooses to play 'fibrin' at (7, 0) (
    across) for 36 points
334 Greedy AI plays 'fibrin' at (7, 0) across for 36
    points!
335 Adversarial AI chooses to play 'vatu' at (13, 2) (
    across) for 13 points
336 This move limits opponent's maximum potential
    score to 24 points
337 Adversarial AI plays 'vatu' at (13, 2) across for
    13 points!
338 Greedy AI chooses to play 'cham' at (11, 3) (down
    ) for 28 points
339 Greedy AI plays 'cham' at (11, 3) down for 28
    points!
340 Adversarial AI chooses to play 'etic' at (11, 0) (
    across) for 7 points
341 This move limits opponent's maximum potential
    score to 18 points
342 Adversarial AI plays 'etic' at (11, 0) across for
    7 points!
343 Greedy AI chooses to play 'nieve' at (10, 2) (down
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343 ) for 30 points
344 Greedy AI plays 'nieve' at (10, 2) down for 30
    points!
345 Adversarial AI chooses to play 'mib' at (12, 13) (
    down) for 14 points
346 This move limits opponent's maximum potential
    score to 10 points
347 Adversarial AI plays 'mib' at (12, 13) down for 14
    points!
348 Greedy AI chooses to play 'raj' at (0, 12) (across
    ) for 10 points
349 Greedy AI plays 'raj' at (0, 12) across for 10
    points!
350 Adversarial AI chooses to play 'do' at (11, 5) (
    across) for 6 points
351 This move limits opponent's maximum potential
    score to 8 points
352 Adversarial AI plays 'do' at (11, 5) across for 6
    points!
353 Greedy AI chooses to play 'frore' at (7, 0) (down
    ) for 8 points
354 Greedy AI plays 'frore' at (7, 0) down for 8
    points!
355 Adversarial AI chooses to play 'ads' at (6, 10) (
    across) for 15 points
356 This move limits opponent's maximum potential
    score to 5 points
357 Adversarial AI plays 'ads' at (6, 10) across for
    15 points!
358 Greedy AI chooses to play 'rin' at (10, 0) (across
    ) for 5 points
359 Greedy AI plays 'rin' at (10, 0) across for 5
    points!
360 Adversarial AI chooses to play 'ow' at (9, 0) (
    across) for 27 points
361 This move limits opponent's maximum potential
    score to 0 points
362 Adversarial AI plays 'ow' at (9, 0) across for 27
    points!
363 No moves available for Greedy AI. Skipping turn.
364 Adversarial AI chooses to play 'pi' at (6, 1) (
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364 down) for 4 points
365 This move limits opponent's maximum potential
    score to 0 points
366 Adversarial AI plays 'pi' at (6, 1) down for 4
    points!
367 No moves available for Greedy AI. Skipping turn.
368 No moves available for Adversarial AI. Skipping
    turn.
369
370 Neither player has any available moves. Game
    ending.
371
372 --- GAME OVER ---
373 Final Board:
374 _____raj
375 _____q____u
376 _____u_ados
377 _____cargo__
378 _____aga_lez
379 _____u_yett_
380 _p_____d_ads__
381 fibrin_ae_____
382 r___n_vexil_____
383 ow__l____nor_____
384 rin_yip____weel_
385 etic_do__teth__
386 __eh__if_o_o_m_
387 __vatu_e_g_o_i_
388 __em_nines_kabs
389 Board saved to 'assets/game_output.png'
390
391 Final Scores:
392 Adversarial AI: 797 points
393 Greedy AI: 1042 points
394
395 Greedy AI wins!
396
397 Game 4/5
398 Greedy AI starts the game!
399 Greedy AI plays 'ae' at (7, 7) across for 2 points
    !
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```
400 Greedy AI chooses to play 'wife' at (8, 6) (across
    ) for 29 points
401 Greedy AI plays 'wife' at (8, 6) across for 29
    points!
402 Adversarial AI chooses to play 'etui' at (8, 9) (
    down) for 6 points
403 This move limits opponent's maximum potential
    score to 23 points
404 Adversarial AI plays 'etui' at (8, 9) down for 6
    points!
405 Greedy AI chooses to play 'pricy' at (11, 7) (
    across) for 30 points
406 Greedy AI plays 'pricy' at (11, 7) across for 30
    points!
407 Adversarial AI chooses to play 'ring' at (6, 8) (
    across) for 13 points
408 This move limits opponent's maximum potential
    score to 25 points
409 Adversarial AI plays 'ring' at (6, 8) across for
    13 points!
410 Greedy AI chooses to play 'hi' at (5, 9) (across)
    for 28 points
411 Greedy AI plays 'hi' at (5, 9) across for 28
    points!
412 Adversarial AI chooses to play 'leg' at (4, 11) (
    down) for 10 points
413 This move limits opponent's maximum potential
    score to 30 points
414 Adversarial AI plays 'leg' at (4, 11) down for 10
    points!
415 Greedy AI chooses to play 'floc' at (4, 10) (
    across) for 30 points
416 Greedy AI plays 'floc' at (4, 10) across for 30
    points!
417 Adversarial AI chooses to play 'exit' at (12, 11
    ) (across) for 27 points
418 This move limits opponent's maximum potential
    score to 31 points
419 Adversarial AI plays 'exit' at (12, 11) across for
    27 points!
420 Greedy AI chooses to play 'darbs' at (0, 14) (down
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420 ) for 43 points
421 Greedy AI plays 'darbs' at (0, 14) down for 43
    points!
422 Adversarial AI chooses to play 'pawl' at (11, 7) (
    down) for 27 points
423 This move limits opponent's maximum potential
    score to 24 points
424 Adversarial AI plays 'pawl' at (11, 7) down for 27
    points!
425 Greedy AI chooses to play 'glottal' at (8, 14) (
    down) for 27 points
426 Greedy AI plays 'glottal' at (8, 14) down for 27
    points!
427 Adversarial AI chooses to play 'bod' at (3, 12) (
    down) for 14 points
428 This move limits opponent's maximum potential
    score to 27 points
429 Adversarial AI plays 'bod' at (3, 12) down for 14
    points!
430 Greedy AI chooses to play 'kae' at (12, 6) (down)
    for 30 points
431 Greedy AI plays 'kae' at (12, 6) down for 30
    points!
432 Adversarial AI chooses to play 'ohm' at (12, 5) (
    down) for 45 points
433 This move limits opponent's maximum potential
    score to 16 points
434 Adversarial AI plays 'ohm' at (12, 5) down for 45
    points!
435 Greedy AI chooses to play 'sauna' at (13, 10) (
    across) for 29 points
436 Greedy AI plays 'sauna' at (13, 10) across for 29
    points!
437 Adversarial AI chooses to play 'tet' at (9, 5) (
    across) for 13 points
438 This move limits opponent's maximum potential
    score to 20 points
439 Adversarial AI plays 'tet' at (9, 5) across for 13
    points!
440 Greedy AI chooses to play 'fines' at (4, 10) (down
    ) for 19 points
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441 Greedy AI plays 'fines' at (4, 10) down for 19
    points!
442 Adversarial AI chooses to play 'nae' at (10, 4) (
    across) for 14 points
443 This move limits opponent's maximum potential
    score to 18 points
444 Adversarial AI plays 'nae' at (10, 4) across for
    14 points!
445 Greedy AI chooses to play 'zero' at (11, 1) (
    across) for 28 points
446 Greedy AI plays 'zero' at (11, 1) across for 28
    points!
447 Adversarial AI chooses to play 'meou' at (10, 2) (
    down) for 12 points
448 This move limits opponent's maximum potential
    score to 19 points
449 Adversarial AI plays 'meou' at (10, 2) down for 12
    points!
450 Greedy AI chooses to play 'op' at (0, 13) (down)
    for 19 points
451 Greedy AI plays 'op' at (0, 13) down for 19 points
    !
452 Adversarial AI chooses to play 'jug' at (13, 1) (
    across) for 22 points
453 This move limits opponent's maximum potential
    score to 16 points
454 Adversarial AI plays 'jug' at (13, 1) across for
    22 points!
455 Greedy AI chooses to play 'ringer' at (6, 8) (
    across) for 16 points
456 Greedy AI plays 'ringer' at (6, 8) across for 16
    points!
457 Adversarial AI chooses to play 'yo' at (14, 0) (
    across) for 24 points
458 This move limits opponent's maximum potential
    score to 15 points
459 Adversarial AI plays 'yo' at (14, 0) across for 24
    points!
460 Greedy AI chooses to play 'vena' at (2, 9) (across
    ) for 30 points
461 Greedy AI plays 'vena' at (2, 9) across for 30
```

- 461 points!
- 462 Adversarial AI chooses to play 'dor' at (14, 9) (across) for 15 points
- 463 This move limits opponent's maximum potential score to 15 points
- 464 Adversarial AI plays 'dor' at (14, 9) across for 15 points!
- 465 Greedy AI chooses to play 'nadir' at (7, 3) (down) for 14 points
- 466 Greedy AI plays 'nadir' at (7, 3) down for 14 points!
- 467 Adversarial AI chooses to play 'en' at (9, 13) (down) for 10 points
- 468 This move limits opponent's maximum potential score to 7 points
- 469 Adversarial AI plays 'en' at (9, 13) down for 10 points!
- 470 Greedy AI chooses to play 'via' at (8, 1) (across) for 7 points
- 471 Greedy AI plays 'via' at (8, 1) across for 7 points!
- 472 Adversarial AI chooses to play 'tae' at (7, 6) (across) for 10 points
- 473 This move limits opponent's maximum potential score to 0 points
- 474 Adversarial AI plays 'tae' at (7, 6) across for 10 points!
- 475 No moves available for Greedy AI. Skipping turn.
- 476 Adversarial AI chooses to play 'haws' at (13, 5) (across) for 10 points
- 477 This move limits opponent's maximum potential score to 0 points
- 478 Adversarial AI plays 'haws' at (13, 5) across for 10 points!
- 479 No moves available for Greedy AI. Skipping turn.
- 480 Adversarial AI chooses to play 'nu' at (7, 3) (across) for 2 points
- 481 This move limits opponent's maximum potential score to 0 points
- 482 Adversarial AI plays 'nu' at (7, 3) across for 2 points!

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483 No moves available for Greedy AI. Skipping turn.
484 Adversarial AI chooses to play 'in' at (1, 11) (
    down) for 2 points
485 This move limits opponent's maximum potential
    score to 0 points
486 Adversarial AI plays 'in' at (1, 11) down for 2
    points!
487 No moves available for Greedy AI. Skipping turn.
488 No moves available for Adversarial AI. Skipping
    turn.
489
490 Neither player has any available moves. Game
    ending.
491
492 --- GAME OVER ---
493 Final Board:
494 _____od
495 _____i_pa
496 _____vena_r
497 _____b_b
498 _____flocs
499 _____hied__
500 _____ringer_
501 __nu_tae_e____
502 _via__wifes___g
503 __d_tet_t___el
504 __minae__u___no
505 _zero__pricy__t
506 __o__oka___exit
507 _jug_haws_sauna
508 yo___mel_dor__l
509 Board saved to 'assets/game_output.png'
510
511 Final Scores:
512 Adversarial AI: 1073 points
513 Greedy AI: 1423 points
514
515 Greedy AI wins!
516
517 Game 5/5
518 Greedy AI starts the game!
```

519 Greedy AI plays 'oe' at (7, 7) across for 2 points!
520 Greedy AI chooses to play 'jaw' at (6, 7) (across) for 26 points
521 Greedy AI plays 'jaw' at (6, 7) across for 26 points!
522 Adversarial AI chooses to play 'braw' at (3, 9) (down) for 11 points
523 This move limits opponent's maximum potential score to 20 points
524 Adversarial AI plays 'braw' at (3, 9) down for 11 points!
525 Greedy AI chooses to play 'taboo' at (3, 7) (across) for 16 points
526 Greedy AI plays 'taboo' at (3, 7) across for 16 points!
527 Adversarial AI chooses to play 'arf' at (4, 8) (across) for 24 points
528 This move limits opponent's maximum potential score to 23 points
529 Adversarial AI plays 'arf' at (4, 8) across for 24 points!
530 Greedy AI chooses to play 'pint' at (0, 7) (down) for 18 points
531 Greedy AI plays 'pint' at (0, 7) down for 18 points!
532 Adversarial AI chooses to play 'mi' at (2, 11) (across) for 12 points
533 This move limits opponent's maximum potential score to 18 points
534 Adversarial AI plays 'mi' at (2, 11) across for 12 points!
535 Greedy AI chooses to play 'ourari' at (0, 13) (down) for 21 points
536 Greedy AI plays 'ourari' at (0, 13) down for 21 points!
537 Adversarial AI chooses to play 'peon' at (0, 11) (across) for 27 points
538 This move limits opponent's maximum potential score to 25 points
539 Adversarial AI plays 'peon' at (0, 11) across for

539 27 points!

540 Greedy AI chooses to play 'inby' at (8, 4) (across) for 25 points

541 Greedy AI plays 'inby' at (8, 4) across for 25 points!

542 Adversarial AI chooses to play 'dah' at (5, 14) (down) for 24 points

543 This move limits opponent's maximum potential score to 30 points

544 Adversarial AI plays 'dah' at (5, 14) down for 24 points!

545 Greedy AI chooses to play 'winds' at (7, 0) (across) for 35 points

546 Greedy AI plays 'winds' at (7, 0) across for 35 points!

547 Adversarial AI chooses to play 'art' at (7, 13) (down) for 10 points

548 This move limits opponent's maximum potential score to 16 points

549 Adversarial AI plays 'art' at (7, 13) down for 10 points!

550 Greedy AI chooses to play 'yessing' at (4, 4) (down) for 44 points

551 Greedy AI plays 'yessing' at (4, 4) down for 44 points!

552 Adversarial AI chooses to play 'queue' at (5, 2) (across) for 16 points

553 This move limits opponent's maximum potential score to 19 points

554 Adversarial AI plays 'queue' at (5, 2) across for 16 points!

555 Greedy AI chooses to play 'sex' at (9, 7) (across) for 40 points

556 Greedy AI plays 'sex' at (9, 7) across for 40 points!

557 Adversarial AI chooses to play 'zees' at (10, 10) (across) for 30 points

558 This move limits opponent's maximum potential score to 17 points

559 Adversarial AI plays 'zees' at (10, 10) across for 30 points!

- 560 Greedy AI chooses to play 'relook' at (9, 11) (down) for 30 points
- 561 Greedy AI plays 'relook' at (9, 11) down for 30 points!
- 562 Adversarial AI chooses to play 'creek' at (14, 7) (across) for 33 points
- 563 This move limits opponent's maximum potential score to 23 points
- 564 Adversarial AI plays 'creek' at (14, 7) across for 33 points!
- 565 Greedy AI chooses to play 'fuzees' at (10, 8) (across) for 32 points
- 566 Greedy AI plays 'fuzees' at (10, 8) across for 32 points!
- 567 Adversarial AI chooses to play 'dolt' at (13, 10) (across) for 13 points
- 568 This move limits opponent's maximum potential score to 26 points
- 569 Adversarial AI plays 'dolt' at (13, 10) across for 13 points!
- 570 Greedy AI chooses to play 'nilgau' at (0, 3) (down) for 21 points
- 571 Greedy AI plays 'nilgau' at (0, 3) down for 21 points!
- 572 Adversarial AI chooses to play 'var' at (12, 8) (down) for 10 points
- 573 This move limits opponent's maximum potential score to 18 points
- 574 Adversarial AI plays 'var' at (12, 8) down for 10 points!
- 575 Greedy AI chooses to play 'imino' at (0, 0) (across) for 21 points
- 576 Greedy AI plays 'imino' at (0, 0) across for 21 points!
- 577 Adversarial AI chooses to play 'might' at (0, 1) (down) for 22 points
- 578 This move limits opponent's maximum potential score to 19 points
- 579 Adversarial AI plays 'might' at (0, 1) down for 22 points!
- 580 Greedy AI chooses to play 'clone' at (9, 1) (

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580 across) for 19 points
581 Greedy AI plays 'clone' at (9, 1) across for 19
    points!
582 Adversarial AI chooses to play 'ad' at (3, 13) (
    across) for 5 points
583 This move limits opponent's maximum potential
    score to 10 points
584 Adversarial AI plays 'ad' at (3, 13) across for 5
    points!
585 Greedy AI chooses to play 'gelt' at (2, 1) (across
    ) for 10 points
586 Greedy AI plays 'gelt' at (2, 1) across for 10
    points!
587 Adversarial AI chooses to play 'at' at (5, 9) (
    across) for 8 points
588 This move limits opponent's maximum potential
    score to 9 points
589 Adversarial AI plays 'at' at (5, 9) across for 8
    points!
590 Greedy AI chooses to play 'mire' at (2, 11) (
    across) for 9 points
591 Greedy AI plays 'mire' at (2, 11) across for 9
    points!
592 No moves available for Adversarial AI. Skipping
    turn.
593 No moves available for Greedy AI. Skipping turn.
594
595 Neither player has any available moves. Game
    ending.
596
597 --- GAME OVER ---
598 Final Board:
599 imino__p___peon
600 _i_i___i_____u_
601 _gelt__n___mire
602 _h_g___taboo_ad
603 _t_ay___arf__r_
604 __queue__at__id
605 ___s__jaw___a
606 winds__oe____ah
607 ___inby_____r_
```

```
608 _clone_sex_r_t_
609 ___g___fuzees_
610 _____l_____
611 _____v_o_____
612 _____a_dolt_
613 _____creek_____
614 Board saved to 'assets/game_output.png'
615
616 Final Scores:
617 Adversarial AI: 1318 points
618 Greedy AI: 1792 points
619
620 Greedy AI wins!
621
622 Playing matches between Greedy AI and MCTS AI
623
624 Game 1/5
625 Greedy AI starts the game!
626 Greedy AI plays 'ae' at (7, 7) across for 2 points
!
627 Greedy AI chooses to play 'laved' at (8, 4) (
across) for 22 points
628 Greedy AI plays 'laved' at (8, 4) across for 22
points!
629
630 MCTS AI's decision process:
631 Choosing to play 'taw' at (9, 3) (across) for 29
points
632 Expected net score advantage: 0.6 points
633 Based on 10 simulated opponent responses
634 MCTS AI plays 'taw' at (9, 3) across for 29 points
!
635 Greedy AI chooses to play 'ox' at (10, 3) (across
) for 40 points
636 Greedy AI plays 'ox' at (10, 3) across for 40
points!
637
638 MCTS AI's decision process:
639 Choosing to play 'oxen' at (10, 3) (across) for 17
points
640 Expected net score advantage: -7.4 points
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641 Based on 10 simulated opponent responses
642 MCTS AI plays 'oxen' at (10, 3) across for 17
    points!
643 Greedy AI chooses to play 'sudd' at (11, 0) (
    across) for 22 points
644 Greedy AI plays 'sudd' at (11, 0) across for 22
    points!
645
646 MCTS AI's decision process:
647 Choosing to play 'unais' at (7, 0) (down) for 15
    points
648 Expected net score advantage: -13.6 points
649 Based on 10 simulated opponent responses
650 MCTS AI plays 'unais' at (7, 0) down for 15 points
    !
651 Greedy AI chooses to play 'fet' at (6, 8) (across
    ) for 21 points
652 Greedy AI plays 'fet' at (6, 8) across for 21
    points!
653
654 MCTS AI's decision process:
655 Choosing to play 'aerie' at (7, 10) (across) for
    20 points
656 Expected net score advantage: -11.0 points
657 Based on 10 simulated opponent responses
658 MCTS AI plays 'aerie' at (7, 10) across for 20
    points!
659 Greedy AI chooses to play 'hip' at (5, 1) (down)
    for 20 points
660 Greedy AI plays 'hip' at (5, 1) down for 20 points
    !
661
662 MCTS AI's decision process:
663 Choosing to play 'aerobe' at (0, 0) (down) for 32
    points
664 Expected net score advantage: 3.1 points
665 Based on 10 simulated opponent responses
666 MCTS AI plays 'aerobe' at (0, 0) down for 32
    points!
667 Greedy AI chooses to play 'listees' at (2, 11) (
    down) for 21 points
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668 Greedy AI plays 'listees' at (2, 11) down for 21
    points!
669
670 MCTS AI's decision process:
671 Choosing to play 'suq' at (10, 1) (down) for 14
    points
672 Expected net score advantage: -13.9 points
673 Based on 10 simulated opponent responses
674 MCTS AI plays 'suq' at (10, 1) down for 14 points!
675 Greedy AI chooses to play 'muting' at (5, 9) (
    across) for 30 points
676 Greedy AI plays 'muting' at (5, 9) across for 30
    points!
677
678 MCTS AI's decision process:
679 Choosing to play 'noo' at (6, 2) (down) for 13
    points
680 Expected net score advantage: -13.8 points
681 Based on 10 simulated opponent responses
682 MCTS AI plays 'noo' at (6, 2) down for 13 points!
683 Greedy AI chooses to play 'wanly' at (2, 8) (
    across) for 30 points
684 Greedy AI plays 'wanly' at (2, 8) across for 30
    points!
685
686 MCTS AI's decision process:
687 Choosing to play 'ah' at (1, 8) (across) for 31
    points
688 Expected net score advantage: -2.3 points
689 Based on 10 simulated opponent responses
690 MCTS AI plays 'ah' at (1, 8) across for 31 points!
691 Greedy AI chooses to play 'flax' at (7, 4) (down)
    for 14 points
692 Greedy AI plays 'flax' at (7, 4) down for 14
    points!
693
694 MCTS AI's decision process:
695 Choosing to play 'or' at (0, 7) (across) for 12
    points
696 Expected net score advantage: -14.8 points
697 Based on 10 simulated opponent responses
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698 MCTS AI plays 'or' at (0, 7) across for 12 points!
699 Greedy AI chooses to play 'chap' at (0, 9) (down)
    for 16 points
700 Greedy AI plays 'chap' at (0, 9) down for 16
    points!
701
702 MCTS AI's decision process:
703 Choosing to play 'rook' at (3, 3) (down) for 23
    points
704 Expected net score advantage: -3.8 points
705 Based on 10 simulated opponent responses
706 MCTS AI plays 'rook' at (3, 3) down for 23 points!
707 Greedy AI chooses to play 'id' at (0, 1) (down)
    for 14 points
708 Greedy AI plays 'id' at (0, 1) down for 14 points!
709
710 MCTS AI's decision process:
711 Choosing to play 'razing' at (0, 14) (down) for 51
    points
712 Expected net score advantage: 28.3 points
713 Based on 10 simulated opponent responses
714 MCTS AI plays 'razing' at (0, 14) down for 51
    points!
715 Greedy AI chooses to play 'veg' at (2, 2) (down)
    for 19 points
716 Greedy AI plays 'veg' at (2, 2) down for 19 points
    !
717
718 MCTS AI's decision process:
719 Choosing to play 'got' at (4, 2) (across) for 8
    points
720 Expected net score advantage: -14.6 points
721 Based on 10 simulated opponent responses
722 MCTS AI plays 'got' at (4, 2) across for 8 points!
723 Greedy AI chooses to play 'boa' at (1, 12) (across
    ) for 17 points
724 Greedy AI plays 'boa' at (1, 12) across for 17
    points!
725
726 MCTS AI's decision process:
727 Choosing to play 'emic' at (7, 14) (down) for 8
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727 points
728 Expected net score advantage: -10.1 points
729 Based on 10 simulated opponent responses
730 MCTS AI plays 'emic' at (7, 14) down for 8 points!
731 Greedy AI chooses to play 'tentie' at (3, 13) (
    down) for 14 points
732 Greedy AI plays 'tentie' at (3, 13) down for 14
    points!
733
734 MCTS AI's decision process:
735 Choosing to play 'yah' at (1, 7) (across) for 14
    points
736 Expected net score advantage: 9.0 points
737 Based on 10 simulated opponent responses
738 MCTS AI plays 'yah' at (1, 7) across for 14 points
    !
739 Greedy AI chooses to play 'nurl' at (10, 6) (down
    ) for 5 points
740 Greedy AI plays 'nurl' at (10, 6) down for 5
    points!
741
742 MCTS AI's decision process:
743 Choosing to play 'jill' at (13, 4) (across) for 13
    points
744 Expected net score advantage: 13.0 points
745 Based on 10 simulated opponent responses
746 MCTS AI plays 'jill' at (13, 4) across for 13
    points!
747 No moves available for Greedy AI. Skipping turn.
748 No moves available for MCTS AI. Skipping turn.
749
750 Neither player has any available moves. Game
    ending.
751
752 --- GAME OVER ---
753 Final Board:
754 ai_____orc____r
755 ed_____yah__boa
756 r_v_____wanly_z
757 o_er_____p_i_ti
758 b_got_____s_en
```

```
759 eh_o_____muting
760 _ink____fete_t_
761 upo_f__ae_aerie
762 n_o_laved__s_em
763 a__taw_______i
764 is_oxen_______c
765 sudd__u_____
766 _q____r_____
767 ___jill_____
768 _____
769 Board saved to 'assets/game_output.png'
770
771 Final Scores:
772 MCTS AI: 300 points
773 Greedy AI: 2099 points
774
775 Greedy AI wins!
776
777 Game 2/5
778 Greedy AI starts the game!
779 Greedy AI plays 'ai' at (7, 7) across for 2 points
!
780 Greedy AI chooses to play 'jete' at (5, 9) (down)
for 30 points
781 Greedy AI plays 'jete' at (5, 9) down for 30
points!
782
783 MCTS AI's decision process:
784 Choosing to play 'yid' at (6, 8) (down) for 27
points
785 Expected net score advantage: 0.6 points
786 Based on 10 simulated opponent responses
787 MCTS AI plays 'yid' at (6, 8) down for 27 points!
788 Greedy AI chooses to play 'plow' at (3, 10) (down
) for 36 points
789 Greedy AI plays 'plow' at (3, 10) down for 36
points!
790
791 MCTS AI's decision process:
792 Choosing to play 'helio' at (0, 11) (down) for 34
points
```

793 Expected net score advantage: 0.3 points
794 Based on 10 simulated opponent responses
795 MCTS AI plays 'helio' at (0, 11) down for 34 points!
796 Greedy AI chooses to play 'imino' at (0, 12) (down) for 35 points
797 Greedy AI plays 'imino' at (0, 12) down for 35 points!
798
799 MCTS AI's decision process:
800 Choosing to play 'pent' at (0, 13) (down) for 39 points
801 Expected net score advantage: 9.4 points
802 Based on 10 simulated opponent responses
803 MCTS AI plays 'pent' at (0, 13) down for 39 points !
804 Greedy AI chooses to play 'godship' at (0, 7) (across) for 42 points
805 Greedy AI plays 'godship' at (0, 7) across for 42 points!
806
807 MCTS AI's decision process:
808 Choosing to play 'wab' at (8, 10) (down) for 23 points
809 Expected net score advantage: -4.6 points
810 Based on 10 simulated opponent responses
811 MCTS AI plays 'wab' at (8, 10) down for 23 points!
812 Greedy AI chooses to play 'honda' at (9, 11) (down) for 27 points
813 Greedy AI plays 'honda' at (9, 11) down for 27 points!
814
815 MCTS AI's decision process:
816 Choosing to play 'godships' at (0, 7) (across) for 45 points
817 Expected net score advantage: 11.1 points
818 Based on 10 simulated opponent responses
819 MCTS AI plays 'godships' at (0, 7) across for 45 points!
820 Greedy AI chooses to play 'ogive' at (3, 14) (down) for 38 points

821 Greedy AI plays 'ogive' at (3, 14) down for 38 points!
822
823 MCTS AI's decision process:
824 Choosing to play 'arbiter' at (7, 13) (down) for 32 points
825 Expected net score advantage: 1.4 points
826 Based on 10 simulated opponent responses
827 MCTS AI plays 'arbiter' at (7, 13) down for 82 points!
828 Greedy AI chooses to play 'indued' at (12, 9) (across) for 16 points
829 Greedy AI plays 'indued' at (12, 9) across for 16 points!
830
831 MCTS AI's decision process:
832 Choosing to play 'zax' at (11, 7) (across) for 38 points
833 Expected net score advantage: -1.4 points
834 Based on 10 simulated opponent responses
835 MCTS AI plays 'zax' at (11, 7) across for 38 points!
836 Greedy AI chooses to play 'azine' at (10, 7) (down) for 42 points
837 Greedy AI plays 'azine' at (10, 7) down for 42 points!
838
839 MCTS AI's decision process:
840 Choosing to play 'odea' at (11, 14) (down) for 23 points
841 Expected net score advantage: 3.6 points
842 Based on 10 simulated opponent responses
843 MCTS AI plays 'odea' at (11, 14) down for 23 points!
844 Greedy AI chooses to play 'vents' at (13, 5) (across) for 30 points
845 Greedy AI plays 'vents' at (13, 5) across for 30 points!
846
847 MCTS AI's decision process:
848 Choosing to play 'dens' at (0, 9) (down) for 15

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848 points
849 Expected net score advantage: -2.6 points
850 Based on 10 simulated opponent responses
851 MCTS AI plays 'dens' at (0, 9) down for 15 points!
852 Greedy AI chooses to play 'fyke' at (10, 4) (down
    ) for 37 points
853 Greedy AI plays 'fyke' at (10, 4) down for 37
    points!
854
855 MCTS AI's decision process:
856 Choosing to play 'flack' at (12, 0) (across) for
    28 points
857 Expected net score advantage: 2.6 points
858 Based on 10 simulated opponent responses
859 MCTS AI plays 'flack' at (12, 0) across for 28
    points!
860 Greedy AI chooses to play 'gofer' at (10, 0) (down
    ) for 30 points
861 Greedy AI plays 'gofer' at (10, 0) down for 30
    points!
862
863 MCTS AI's decision process:
864 Choosing to play 'abo' at (10, 9) (across) for 16
    points
865 Expected net score advantage: 2.0 points
866 Based on 10 simulated opponent responses
867 MCTS AI plays 'abo' at (10, 9) across for 16
    points!
868 Greedy AI chooses to play 'mi' at (12, 6) (across
    ) for 14 points
869 Greedy AI plays 'mi' at (12, 6) across for 14
    points!
870
871 MCTS AI's decision process:
872 Choosing to play 'tuft' at (10, 2) (across) for 7
    points
873 Expected net score advantage: 2.0 points
874 Based on 10 simulated opponent responses
875 MCTS AI plays 'tuft' at (10, 2) across for 7
    points!
876 Greedy AI chooses to play 'arc' at (12, 2) (down)
```

```
876 for 5 points
877 Greedy AI plays 'arc' at (12, 2) down for 5 points
!
878
879 MCTS AI's decision process:
880 Choosing to play 'li' at (5, 13) (across) for 4
    points
881 Expected net score advantage: 0.0 points
882 Based on 10 simulated opponent responses
883 MCTS AI plays 'li' at (5, 13) across for 4 points!
884 Greedy AI chooses to play 're' at (1, 8) (across)
    for 4 points
885 Greedy AI plays 're' at (1, 8) across for 4 points
!
886
887 MCTS AI's decision process:
888 Choosing to play 'ut' at (9, 5) (down) for 4
    points
889 Expected net score advantage: 0.0 points
890 Based on 10 simulated opponent responses
891 MCTS AI plays 'ut' at (9, 5) down for 4 points!
892 Greedy AI chooses to play 'bi' at (9, 13) (across
    ) for 4 points
893 Greedy AI plays 'bi' at (9, 13) across for 4
    points!
894
895 MCTS AI's decision process:
896 Choosing to play 'ut' at (9, 2) (down) for 2
    points
897 Expected net score advantage: -2.0 points
898 Based on 10 simulated opponent responses
899 MCTS AI plays 'ut' at (9, 2) down for 2 points!
900 Greedy AI chooses to play 'rut' at (8, 2) (down)
    for 4 points
901 Greedy AI plays 'rut' at (8, 2) down for 4 points!
902 No moves available for MCTS AI. Skipping turn.
903 No moves available for Greedy AI. Skipping turn.
904
905 Neither player has any available moves. Game
    ending.
906
```

```
907 --- GAME OVER ---
908 Final Board:
909      godships
910      re_eme_
911      n_lin_
912      spinto
913      loo_g
914      jo_li
915      yew_v
916      ait_ae
917      r_dew_r_
918      u_u_ah_bi
919      g_tuft_a_abo_i_
920      o_y_zax_n_to
921      flack_mi_induced
922      e_r_events_a_re
923      r_c_e_a
924 Board saved to 'assets/game_output.png'
925
926 Final Scores:
927 Greedy AI: 2495 points
928 MCTS AI: 687 points
929
930 Greedy AI wins!
931
932 Game 3/5
933 Greedy AI starts the game!
934 Greedy AI plays 'de' at (7, 7) across for 3 points
!
935 Greedy AI chooses to play 'taboo' at (6, 6) (
across) for 21 points
936 Greedy AI plays 'taboo' at (6, 6) across for 21
points!
937
938 MCTS AI's decision process:
939 Choosing to play 'jouk' at (5, 10) (across) for 34
points
940 Expected net score advantage: 4.2 points
941 Based on 10 simulated opponent responses
942 MCTS AI plays 'jouk' at (5, 10) across for 34
points!
```

```
943 Greedy AI chooses to play 'niseis' at (3, 14) (down) for 37 points
944 Greedy AI plays 'niseis' at (3, 14) down for 37 points!
945
946 MCTS AI's decision process:
947 Choosing to play 'ex' at (7, 10) (across) for 27 points
948 Expected net score advantage: 0.6 points
949 Based on 10 simulated opponent responses
950 MCTS AI plays 'ex' at (7, 10) across for 27 points!
951 Greedy AI chooses to play 'wizens' at (8, 5) (across) for 50 points
952 Greedy AI plays 'wizens' at (8, 5) across for 50 points!
953
954 MCTS AI's decision process:
955 Choosing to play 'en' at (9, 7) (across) for 22 points
956 Expected net score advantage: -0.2 points
957 Based on 10 simulated opponent responses
958 MCTS AI plays 'en' at (9, 7) across for 22 points!
959 Greedy AI chooses to play 'mojoes' at (3, 10) (down) for 30 points
960 Greedy AI plays 'mojoes' at (3, 10) down for 30 points!
961
962 MCTS AI's decision process:
963 Choosing to play 'mucin' at (3, 10) (across) for 18 points
964 Expected net score advantage: -6.6 points
965 Based on 10 simulated opponent responses
966 MCTS AI plays 'mucin' at (3, 10) across for 18 points!
967 Greedy AI chooses to play 'hurter' at (7, 13) (down) for 18 points
968 Greedy AI plays 'hurter' at (7, 13) down for 18 points!
969
970 MCTS AI's decision process:
```

```
971 Choosing to play 'mobs' at (13, 10) (across) for
   36 points
972 Expected net score advantage: 4.2 points
973 Based on 10 simulated opponent responses
974 MCTS AI plays 'mobs' at (13, 10) across for 36
   points!
975 Greedy AI chooses to play 'netop' at (10, 11) (
   down) for 20 points
976 Greedy AI plays 'netop' at (10, 11) down for 20
   points!
977
978 MCTS AI's decision process:
979 Choosing to play 'reeve' at (9, 1) (across) for
   19 points
980 Expected net score advantage: -7.1 points
981 Based on 10 simulated opponent responses
982 MCTS AI plays 'reeve' at (9, 1) across for 19
   points!
983 Greedy AI chooses to play 'dah' at (8, 0) (across
   ) for 22 points
984 Greedy AI plays 'dah' at (8, 0) across for 22
   points!
985
986 MCTS AI's decision process:
987 Choosing to play 'alt' at (7, 0) (across) for 27
   points
988 Expected net score advantage: 3.4 points
989 Based on 10 simulated opponent responses
990 MCTS AI plays 'alt' at (7, 0) across for 27
   points!
991 Greedy AI chooses to play 'wab' at (11, 12) (down
   ) for 28 points
992 Greedy AI plays 'wab' at (11, 12) down for 28
   points!
993
994 MCTS AI's decision process:
995 Choosing to play 'yip' at (14, 9) (across) for 12
   points
996 Expected net score advantage: -9.1 points
997 Based on 10 simulated opponent responses
998 MCTS AI plays 'yip' at (14, 9) across for 12
```

```
998 points!
999 Greedy AI chooses to play 'ledge' at (8, 3) (down
    ) for 22 points
1000 Greedy AI plays 'ledge' at (8, 3) down for 22
    points!
1001
1002 MCTS AI's decision process:
1003 Choosing to play 'grift' at (13, 2) (across) for
    25 points
1004 Expected net score advantage: 5.5 points
1005 Based on 10 simulated opponent responses
1006 MCTS AI plays 'grift' at (13, 2) across for 25
    points!
1007 Greedy AI chooses to play 'tail' at (14, 4) (
    across) for 21 points
1008 Greedy AI plays 'tail' at (14, 4) across for 21
    points!
1009
1010 MCTS AI's decision process:
1011 Choosing to play 'avatar' at (12, 8) (across) for
    15 points
1012 Expected net score advantage: -3.3 points
1013 Based on 10 simulated opponent responses
1014 MCTS AI plays 'avatar' at (12, 8) across for 15
    points!
1015 Greedy AI chooses to play 'gaed' at (12, 1) (
    across) for 22 points
1016 Greedy AI plays 'gaed' at (12, 1) across for 22
    points!
1017
1018 MCTS AI's decision process:
1019 Choosing to play 'find' at (10, 0) (across) for
    19 points
1020 Expected net score advantage: -3.1 points
1021 Based on 10 simulated opponent responses
1022 MCTS AI plays 'find' at (10, 0) across for 19
    points!
1023 Greedy AI chooses to play 'rya' at (14, 0) (
    across) for 22 points
1024 Greedy AI plays 'rya' at (14, 0) across for 22
    points!
```

```
1025
1026 MCTS AI's decision process:
1027 Choosing to play 'occur' at (2, 12) (down) for 20
    points
1028 Expected net score advantage: 11.0 points
1029 Based on 10 simulated opponent responses
1030 MCTS AI plays 'occur' at (2, 12) down for 20
    points!
1031 Greedy AI chooses to play 'gel' at (11, 3) (
    across) for 9 points
1032 Greedy AI plays 'gel' at (11, 3) across for 9
    points!
1033
1034 MCTS AI's decision process:
1035 Choosing to play 'op' at (11, 7) (across) for 9
    points
1036 Expected net score advantage: 5.0 points
1037 Based on 10 simulated opponent responses
1038 MCTS AI plays 'op' at (11, 7) across for 9 points
    !
1039 Greedy AI chooses to play 'ion' at (10, 9) (
    across) for 6 points
1040 Greedy AI plays 'ion' at (10, 9) across for 6
    points!
1041
1042 MCTS AI's decision process:
1043 Choosing to play 'nu' at (5, 5) (across) for 6
    points
1044 Expected net score advantage: 6.0 points
1045 Based on 10 simulated opponent responses
1046 MCTS AI plays 'nu' at (5, 5) across for 6 points!
1047 No moves available for Greedy AI. Skipping turn.
1048 No moves available for MCTS AI. Skipping turn.
1049
1050 Neither player has any available moves. Game
    ending.
1051
1052 --- GAME OVER ---
1053 Final Board:
1054 -----
1055 -----
```

```
1056 -----o__  
1057 -----mucin  
1058 -----o_c_i  
1059 ____nu__jouks  
1060 _____taboo_r_e  
1061 alt____de_ex_hi  
1062 dahl_wizens__us  
1063 _reeve_en____r_  
1064 find____ion_t_  
1065 ___gel_op__ewe_  
1066 _gaed___avatar_  
1067 __grift___mobs_  
1068 rya_tail_yip___  
1069 Board saved to 'assets/game_output.png'  
1070  
1071 Final Scores:  
1072 MCTS AI: 976 points  
1073 Greedy AI: 2826 points  
1074  
1075 Greedy AI wins!  
1076  
1077 Game 4/5  
1078 MCTS AI starts the game!  
1079 MCTS AI plays 'me' at (7, 7) across for 4 points!  
1080  
1081 MCTS AI's decision process:  
1082 Choosing to play 'club' at (6, 5) (across) for 23  
    points  
1083 Expected net score advantage: -1.3 points  
1084 Based on 10 simulated opponent responses  
1085 MCTS AI plays 'club' at (6, 5) across for 23  
    points!  
1086 Greedy AI chooses to play 'umiaq' at (6, 7) (down  
    ) for 16 points  
1087 Greedy AI plays 'umiaq' at (6, 7) down for 16  
    points!  
1088  
1089 MCTS AI's decision process:  
1090 Choosing to play 'let' at (6, 6) (down) for 12  
    points  
1091 Expected net score advantage: -9.9 points
```

1092 Based on 10 simulated opponent responses
1093 MCTS AI plays 'let' at (6, 6) down for 12 points!
1094 Greedy AI chooses to play 'agatize' at (9, 7) (across) for 21 points
1095 Greedy AI plays 'agatize' at (9, 7) across for 21 points!
1096
1097 MCTS AI's decision process:
1098 Choosing to play 'ziti' at (9, 12) (down) for 26 points
1099 Expected net score advantage: -12.8 points
1100 Based on 10 simulated opponent responses
1101 MCTS AI plays 'ziti' at (9, 12) down for 26 points!
1102 Greedy AI chooses to play 'didos' at (7, 14) (down) for 43 points
1103 Greedy AI plays 'didos' at (7, 14) down for 43 points!
1104
1105 MCTS AI's decision process:
1106 Choosing to play 'rentes' at (11, 9) (across) for 12 points
1107 Expected net score advantage: -14.2 points
1108 Based on 10 simulated opponent responses
1109 MCTS AI plays 'rentes' at (11, 9) across for 12 points!
1110 Greedy AI chooses to play 'ani' at (10, 10) (across) for 15 points
1111 Greedy AI plays 'ani' at (10, 10) across for 15 points!
1112
1113 MCTS AI's decision process:
1114 Choosing to play 'barren' at (8, 9) (down) for 14 points
1115 Expected net score advantage: -11.9 points
1116 Based on 10 simulated opponent responses
1117 MCTS AI plays 'barren' at (8, 9) down for 14 points!
1118 Greedy AI chooses to play 'togate' at (4, 13) (down) for 14 points
1119 Greedy AI plays 'togate' at (4, 13) down for 14

```
1119 points!
1120
1121 MCTS AI's decision process:
1122 Choosing to play 'eft' at (11, 13) (down) for 17
    points
1123 Expected net score advantage: -10.8 points
1124 Based on 10 simulated opponent responses
1125 MCTS AI plays 'eft' at (11, 13) down for 17
    points!
1126 Greedy AI chooses to play 'oke' at (5, 8) (across
    ) for 22 points
1127 Greedy AI plays 'oke' at (5, 8) across for 22
    points!
1128
1129 MCTS AI's decision process:
1130 Choosing to play 'sorns' at (14, 5) (across) for
    24 points
1131 Expected net score advantage: -5.5 points
1132 Based on 10 simulated opponent responses
1133 MCTS AI plays 'sorns' at (14, 5) across for 24
    points!
1134 Greedy AI chooses to play 'oilway' at (0, 14) (
    down) for 55 points
1135 Greedy AI plays 'oilway' at (0, 14) down for 55
    points!
1136
1137 MCTS AI's decision process:
1138 Choosing to play 'archer' at (2, 11) (down) for
    35 points
1139 Expected net score advantage: 5.9 points
1140 Based on 10 simulated opponent responses
1141 MCTS AI plays 'archer' at (2, 11) down for 35
    points!
1142 Greedy AI chooses to play 'awe' at (1, 12) (down
    ) for 24 points
1143 Greedy AI plays 'awe' at (1, 12) down for 24
    points!
1144
1145 MCTS AI's decision process:
1146 Choosing to play 'fogeys' at (11, 2) (across) for
    46 points
```

```
1147 Expected net score advantage: 16.6 points
1148 Based on 10 simulated opponent responses
1149 MCTS AI plays 'fogeys' at (11, 2) across for 46
    points!
1150 Greedy AI chooses to play 'unipod' at (13, 1) (
    across) for 29 points
1151 Greedy AI plays 'unipod' at (13, 1) across for 29
    points!
1152
1153 MCTS AI's decision process:
1154 Choosing to play 'jupe' at (0, 10) (down) for 24
    points
1155 Expected net score advantage: -5.0 points
1156 Based on 10 simulated opponent responses
1157 MCTS AI plays 'jupe' at (0, 10) down for 24
    points!
1158 Greedy AI chooses to play 'volar' at (10, 1) (
    across) for 31 points
1159 Greedy AI plays 'volar' at (10, 1) across for 31
    points!
1160
1161 MCTS AI's decision process:
1162 Choosing to play 'hen' at (12, 8) (down) for 21
    points
1163 Expected net score advantage: -4.0 points
1164 Based on 10 simulated opponent responses
1165 MCTS AI plays 'hen' at (12, 8) down for 21 points
    !
1166 Greedy AI chooses to play 'duma' at (1, 9) (
    across) for 25 points
1167 Greedy AI plays 'duma' at (1, 9) across for 25
    points!
1168
1169 MCTS AI's decision process:
1170 Choosing to play 'na' at (9, 4) (across) for 13
    points
1171 Expected net score advantage: 3.0 points
1172 Based on 10 simulated opponent responses
1173 MCTS AI plays 'na' at (9, 4) across for 13 points
    !
1174 Greedy AI chooses to play 'lux' at (12, 1) (down
```

```
1174 ) for 10 points
1175 Greedy AI plays 'lux' at (12, 1) down for 10
    points!
1176
1177 MCTS AI's decision process:
1178 Choosing to play 'xu' at (14, 1) (across) for 11
    points
1179 Expected net score advantage: 9.0 points
1180 Based on 10 simulated opponent responses
1181 MCTS AI plays 'xu' at (14, 1) across for 11
    points!
1182 Greedy AI chooses to play 'ti' at (13, 13) (
    across) for 2 points
1183 Greedy AI plays 'ti' at (13, 13) across for 2
    points!
1184 No moves available for MCTS AI. Skipping turn.
1185 No moves available for Greedy AI. Skipping turn.
1186
1187 Neither player has any available moves. Game
    ending.
1188
1189 --- GAME OVER ---
1190 Final Board:
1191 _____j__o
1192 _____duma_i
1193 _____paw_l
1194 _____ere_w
1195 _____c_ta
1196 _____okeh_oy
1197 ____club__e_g_
1198 ____eme__r_ad
1199 ____ti_b__ti
1200 ___na_agatized
1201 _volar_q_rani_o
1202 __fogey_s_rentes
1203 _l_____he__if_
1204 _unipod_en__ti
1205 _xu__sorns_____
1206 Board saved to 'assets/game_output.png'
1207
1208 Final Scores:
```

```
1209 MCTS AI: 1258 points
1210 Greedy AI: 3133 points
1211
1212 Greedy AI wins!
1213
1214 Game 5/5
1215 Greedy AI starts the game!
1216 Greedy AI plays 're' at (7, 7) across for 2
    points!
1217 Greedy AI chooses to play 'blimy' at (5, 9) (down
    ) for 29 points
1218 Greedy AI plays 'blimy' at (5, 9) down for 29
    points!
1219
1220 MCTS AI's decision process:
1221 Choosing to play 'seen' at (7, 10) (down) for 21
    points
1222 Expected net score advantage: -4.0 points
1223 Based on 10 simulated opponent responses
1224 MCTS AI plays 'seen' at (7, 10) down for 21
    points!
1225 Greedy AI chooses to play 'poachy' at (9, 11) (
    down) for 50 points
1226 Greedy AI plays 'poachy' at (9, 11) down for 50
    points!
1227
1228 MCTS AI's decision process:
1229 Choosing to play 'yipe' at (14, 11) (across) for
    27 points
1230 Expected net score advantage: 3.6 points
1231 Based on 10 simulated opponent responses
1232 MCTS AI plays 'yipe' at (14, 11) across for 27
    points!
1233 Greedy AI chooses to play 'bocci' at (12, 8) (
    across) for 28 points
1234 Greedy AI plays 'bocci' at (12, 8) across for 28
    points!
1235
1236 MCTS AI's decision process:
1237 Choosing to play 'glia' at (9, 13) (down) for 21
    points
```

```
1238 Expected net score advantage: -6.1 points
1239 Based on 10 simulated opponent responses
1240 MCTS AI plays 'glia' at (9, 13) down for 21
    points!
1241 Greedy AI chooses to play 'ids' at (10, 14) (down
    ) for 26 points
1242 Greedy AI plays 'ids' at (10, 14) down for 26
    points!
1243
1244 MCTS AI's decision process:
1245 Choosing to play 'lat' at (11, 7) (across) for 10
    points
1246 Expected net score advantage: -12.3 points
1247 Based on 10 simulated opponent responses
1248 MCTS AI plays 'lat' at (11, 7) across for 10
    points!
1249 Greedy AI chooses to play 'var' at (13, 7) (
    across) for 18 points
1250 Greedy AI plays 'var' at (13, 7) across for 18
    points!
1251
1252 MCTS AI's decision process:
1253 Choosing to play 'aqua' at (2, 10) (down) for 30
    points
1254 Expected net score advantage: 3.2 points
1255 Based on 10 simulated opponent responses
1256 MCTS AI plays 'aqua' at (2, 10) down for 30
    points!
1257 Greedy AI chooses to play 'tuque' at (3, 8) (
    across) for 28 points
1258 Greedy AI plays 'tuque' at (3, 8) across for 28
    points!
1259
1260 MCTS AI's decision process:
1261 Choosing to play 'newie' at (2, 12) (down) for 18
    points
1262 Expected net score advantage: -5.8 points
1263 Based on 10 simulated opponent responses
1264 MCTS AI plays 'newie' at (2, 12) down for 18
    points!
1265 Greedy AI chooses to play 'dermoids' at (5, 14) (
```

```
1265 down) for 39 points
1266 Greedy AI plays 'dermoids' at (5, 14) down for 39
    points!
1267
1268 MCTS AI's decision process:
1269 Choosing to play 'kue' at (2, 6) (across) for 16
    points
1270 Expected net score advantage: -7.5 points
1271 Based on 10 simulated opponent responses
1272 MCTS AI plays 'kue' at (2, 6) across for 16
    points!
1273 Greedy AI chooses to play 'jeu' at (0, 7) (down)
    for 30 points
1274 Greedy AI plays 'jeu' at (0, 7) down for 30
    points!
1275
1276 MCTS AI's decision process:
1277 Choosing to play 'oxo' at (6, 5) (across) for 20
    points
1278 Expected net score advantage: -11.8 points
1279 Based on 10 simulated opponent responses
1280 MCTS AI plays 'oxo' at (6, 5) across for 20
    points!
1281 Greedy AI chooses to play 'ligand' at (7, 0) (
    across) for 30 points
1282 Greedy AI plays 'ligand' at (7, 0) across for 30
    points!
1283
1284 MCTS AI's decision process:
1285 Choosing to play 'wire' at (5, 3) (across) for 24
    points
1286 Expected net score advantage: -3.4 points
1287 Based on 10 simulated opponent responses
1288 MCTS AI plays 'wire' at (5, 3) across for 24
    points!
1289 Greedy AI chooses to play 'ditz' at (6, 1) (down
    ) for 34 points
1290 Greedy AI plays 'ditz' at (6, 1) down for 34
    points!
1291
1292 MCTS AI's decision process:
```

```
1293 Choosing to play 'vat' at (4, 2) (across) for 21
      points
1294 Expected net score advantage: -6.8 points
1295 Based on 10 simulated opponent responses
1296 MCTS AI plays 'vat' at (4, 2) across for 21
      points!
1297 Greedy AI chooses to play 'rase' at (1, 13) (down
      ) for 30 points
1298 Greedy AI plays 'rase' at (1, 13) down for 30
      points!
1299
1300 MCTS AI's decision process:
1301 Choosing to play 'jins' at (0, 7) (across) for 11
      points
1302 Expected net score advantage: -18.8 points
1303 Based on 10 simulated opponent responses
1304 MCTS AI plays 'jins' at (0, 7) across for 11
      points!
1305 Greedy AI chooses to play 'feh' at (0, 14) (down
      ) for 35 points
1306 Greedy AI plays 'feh' at (0, 14) down for 35
      points!
1307
1308 MCTS AI's decision process:
1309 Choosing to play 'gnaw' at (2, 3) (down) for 16
      points
1310 Expected net score advantage: 6.0 points
1311 Based on 10 simulated opponent responses
1312 MCTS AI plays 'gnaw' at (2, 3) down for 16 points
      !
1313 Greedy AI chooses to play 'tong' at (2, 0) (
      across) for 10 points
1314 Greedy AI plays 'tong' at (2, 0) across for 10
      points!
1315
1316 MCTS AI's decision process:
1317 Choosing to play 'oft' at (0, 0) (down) for 18
      points
1318 Expected net score advantage: 8.0 points
1319 Based on 10 simulated opponent responses
1320 MCTS AI plays 'oft' at (0, 0) down for 18 points!
```

```
1321 Greedy AI chooses to play 'rex' at (4, 6) (down)
      for 10 points
1322 Greedy AI plays 'rex' at (4, 6) down for 10
      points!
1323
1324 MCTS AI's decision process:
1325 Choosing to play 'tot' at (8, 1) (across) for 10
      points
1326 Expected net score advantage: 10.0 points
1327 Based on 10 simulated opponent responses
1328 MCTS AI plays 'tot' at (8, 1) across for 10
      points!
1329 No moves available for Greedy AI. Skipping turn.
1330 No moves available for MCTS AI. Skipping turn.
1331
1332 Neither player has any available moves. Game
      ending.
1333
1334 --- GAME OVER ---
1335 Final Board:
1336 o_____jins__f
1337 f_____e____re
1338 tong__kue_a_nah
1339 __n____tuques_
1340 __vat_r___u_we_
1341 ___wire__ba_i_d
1342 _d___oxo_l__e_e
1343 ligand_reis__r
1344 _tot_____me___m
1345 _z_____yep_go
1346 _____no_li
1347 _____lat_a_id
1348 _____boccias
1349 _____var_h___
1350 _____yipe
1351 Board saved to 'assets/game_output.png'
1352
1353 Final Scores:
1354 MCTS AI: 1521 points
1355 Greedy AI: 3532 points
1356
```

```
1357 Greedy AI wins!
1358
1359 Playing matches between Greedy AI and
    Conservative AI
1360
1361 Game 1/5
1362 Conservative AI starts the game!
1363 Conservative AI plays 'is' at (7, 7) across for 2
    points!
1364
1365 Conservative AI's decision process:
1366 Choosing to play 'aa' at (6, 7) (across) for 8
    points
1367 Move evaluation score: 28.4
1368 Rack balance after move: 0.63
1369 Conservative AI plays 'aa' at (6, 7) across for 8
    points!
1370 Greedy AI chooses to play 'comb' at (3, 6) (down
    ) for 21 points
1371 Greedy AI plays 'comb' at (3, 6) down for 21
    points!
1372
1373 Conservative AI's decision process:
1374 Choosing to play 'ovoli' at (4, 6) (across) for
    16 points
1375 Move evaluation score: 31.0
1376 Rack balance after move: 0.83
1377 Conservative AI plays 'ovoli' at (4, 6) across
    for 16 points!
1378 Greedy AI chooses to play 'hairy' at (3, 10) (
    across) for 35 points
1379 Greedy AI plays 'hairy' at (3, 10) across for 35
    points!
1380
1381 Conservative AI's decision process:
1382 Choosing to play 'ofay' at (0, 14) (down) for 30
    points
1383 Move evaluation score: 33.0
1384 Rack balance after move: 0.59
1385 Conservative AI plays 'ofay' at (0, 14) down for
    30 points!
```

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1386 Greedy AI chooses to play 'fiz' at (2, 12) (down
    ) for 30 points
1387 Greedy AI plays 'fiz' at (2, 12) down for 30
    points!
1388
1389 Conservative AI's decision process:
1390 Choosing to play 'be' at (0, 13) (down) for 22
    points
1391 Move evaluation score: 32.8
1392 Rack balance after move: 0.73
1393 Conservative AI plays 'be' at (0, 13) down for 22
    points!
1394 Greedy AI chooses to play 'pox' at (8, 8) (across
    ) for 23 points
1395 Greedy AI plays 'pox' at (8, 8) across for 23
    points!
1396
1397 Conservative AI's decision process:
1398 Choosing to play 'combat' at (3, 6) (down) for 16
    points
1399 Move evaluation score: 31.6
1400 Rack balance after move: 0.77
1401 Conservative AI plays 'combat' at (3, 6) down for
    16 points!
1402 Greedy AI chooses to play 'opens' at (7, 10) (
    across) for 39 points
1403 Greedy AI plays 'opens' at (7, 10) across for 39
    points!
1404
1405 Conservative AI's decision process:
1406 Choosing to play 'lox' at (6, 10) (down) for 10
    points
1407 Move evaluation score: 31.6
1408 Rack balance after move: 0.77
1409 Conservative AI plays 'lox' at (6, 10) down for
    10 points!
1410 Greedy AI chooses to play 'toquet' at (8, 1) (
    across) for 16 points
1411 Greedy AI plays 'toquet' at (8, 1) across for 16
    points!
1412
```

```
1413 Conservative AI's decision process:  
1414 Choosing to play 'equal' at (7, 3) (down) for 30  
    points  
1415 Move evaluation score: 30.4  
1416 Rack balance after move: 0.73  
1417 Conservative AI plays 'equal' at (7, 3) down for  
    30 points!  
1418 Greedy AI chooses to play 'keenest' at (6, 12) (down)  
    for 34 points  
1419 Greedy AI plays 'keenest' at (6, 12) down for 34  
    points!  
1420  
1421 Conservative AI's decision process:  
1422 Choosing to play 'aw' at (10, 3) (across) for 10  
    points  
1423 Move evaluation score: 34.5  
1424 Rack balance after move: 0.64  
1425 Conservative AI plays 'aw' at (10, 3) across for  
    10 points!  
1426 Greedy AI chooses to play 'veg' at (10, 2) (down)  
    for 25 points  
1427 Greedy AI plays 'veg' at (10, 2) down for 25  
    points!  
1428  
1429 Conservative AI's decision process:  
1430 Choosing to play 'dew' at (7, 5) (down) for 20  
    points  
1431 Move evaluation score: 29.6  
1432 Rack balance after move: 0.64  
1433 Conservative AI plays 'dew' at (7, 5) down for 20  
    points!  
1434 Greedy AI chooses to play 'ride' at (7, 0) (across)  
    for 20 points  
1435 Greedy AI plays 'ride' at (7, 0) across for 20  
    points!  
1436  
1437 Conservative AI's decision process:  
1438 Choosing to play 'nth' at (9, 12) (across) for 8  
    points  
1439 Move evaluation score: 32.5  
1440 Rack balance after move: 0.64
```

```
1441 Conservative AI plays 'nth' at (9, 12) across for
     8 points!
1442 Greedy AI chooses to play 'dig' at (2, 8) (across
     ) for 14 points
1443 Greedy AI plays 'dig' at (2, 8) across for 14
     points!
1444
1445 Conservative AI's decision process:
1446 Choosing to play 'loxing' at (6, 10) (down) for
     28 points
1447 Move evaluation score: 32.2
1448 Rack balance after move: 0.79
1449 Conservative AI plays 'loxing' at (6, 10) down
     for 28 points!
1450 Greedy AI chooses to play 'combater' at (3, 6) (
     down) for 19 points
1451 Greedy AI plays 'combater' at (3, 6) down for 19
     points!
1452
1453 Conservative AI's decision process:
1454 Choosing to play 'mi' at (9, 9) (across) for 20
     points
1455 Move evaluation score: 36.0
1456 Rack balance after move: 0.89
1457 Conservative AI plays 'mi' at (9, 9) across for
     20 points!
1458 Greedy AI chooses to play 'hurler' at (9, 14) (
     down) for 30 points
1459 Greedy AI plays 'hurler' at (9, 14) down for 30
     points!
1460
1461 Conservative AI's decision process:
1462 Choosing to play 'city' at (6, 1) (down) for 17
     points
1463 Move evaluation score: 33.2
1464 Rack balance after move: 0.89
1465 Conservative AI plays 'city' at (6, 1) down for
     17 points!
1466 Greedy AI chooses to play 'rusticity' at (1, 1) (
     down) for 32 points
1467 Greedy AI plays 'rusticity' at (1, 1) down for 32
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1467 points!
1468
1469 Conservative AI's decision process:
1470 Choosing to play 'unde' at (2, 1) (across) for 10
    points
1471 Move evaluation score: 29.8
1472 Rack balance after move: 0.69
1473 Conservative AI plays 'unde' at (2, 1) across for
    10 points!
1474 Greedy AI chooses to play 'jade' at (0, 3) (down
    ) for 40 points
1475 Greedy AI plays 'jade' at (0, 3) down for 40
    points!
1476
1477 Conservative AI's decision process:
1478 Choosing to play 'joint' at (0, 3) (across) for
    36 points
1479 Move evaluation score: 39.0
1480 Rack balance after move: 0.70
1481 Conservative AI plays 'joint' at (0, 3) across
    for 36 points!
1482 Greedy AI chooses to play 'aa' at (10, 11) (down
    ) for 15 points
1483 Greedy AI plays 'aa' at (10, 11) down for 15
    points!
1484
1485 Conservative AI's decision process:
1486 Choosing to play 'no' at (1, 5) (across) for 10
    points
1487 Move evaluation score: 4.0
1488 Rack balance after move: 0.90
1489 Conservative AI plays 'no' at (1, 5) across for
    10 points!
1490 Greedy AI chooses to play 'vegie' at (10, 2) (
    down) for 9 points
1491 Greedy AI plays 'vegie' at (10, 2) down for 9
    points!
1492 No moves available for Conservative AI. Skipping
    turn.
1493 No moves available for Greedy AI. Skipping turn.
1494
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1495 Neither player has any available moves. Game
ending.
1496
1497 --- GAME OVER ---
1498 Final Board:
1499 __joint____bo
1500 _r_a_no_____ef
1501 _unde__dig_f_a
1502 _s_e__c___hairy
1503 _t____ovoli_z__
1504 _i____m_____
1505 _c____baa_l_k_
1506 ride_daisOpens
1507 _toquet_pox_e__
1508 _y_u_we__mi_nth
1509 __vaw_r___nae_u
1510 __el_____gas_r
1511 __g_____t_l
1512 __i_____e
1513 __e_____r
1514 Board saved to 'assets/game_output.png'
1515
1516 Final Scores:
1517 Greedy AI: 3934 points
1518 Conservative AI: 293 points
1519
1520 Greedy AI wins!
1521
1522 Game 2/5
1523 Conservative AI starts the game!
1524 Conservative AI plays 'de' at (7, 7) across for 3
points!
1525
1526 Conservative AI's decision process:
1527 Choosing to play 'key' at (6, 8) (down) for 19
points
1528 Move evaluation score: 31.6
1529 Rack balance after move: 0.69
1530 Conservative AI plays 'key' at (6, 8) down for 19
points!
1531 Greedy AI chooses to play 'lozenge' at (7, 9) (
```

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1531 down) for 48 points
1532 Greedy AI plays 'lozenge' at (7, 9) down for 98
      points!
1533
1534 Conservative AI's decision process:
1535 Choosing to play 'zoa' at (9, 9) (across) for 12
      points
1536 Move evaluation score: 37.5
1537 Rack balance after move: 0.63
1538 Conservative AI plays 'zoa' at (9, 9) across for
      12 points!
1539 Greedy AI chooses to play 'fibbed' at (10, 5) (
      across) for 34 points
1540 Greedy AI plays 'fibbed' at (10, 5) across for 34
      points!
1541
1542 Conservative AI's decision process:
1543 Choosing to play 'yon' at (8, 8) (across) for 10
      points
1544 Move evaluation score: 27.8
1545 Rack balance after move: 0.79
1546 Conservative AI plays 'yon' at (8, 8) across for
      10 points!
1547 Greedy AI chooses to play 'blame' at (10, 7) (
      down) for 30 points
1548 Greedy AI plays 'blame' at (10, 7) down for 30
      points!
1549
1550 Conservative AI's decision process:
1551 Choosing to play 'nit' at (11, 9) (across) for 11
      points
1552 Move evaluation score: 30.3
1553 Rack balance after move: 0.79
1554 Conservative AI plays 'nit' at (11, 9) across for
      11 points!
1555 Greedy AI chooses to play 'volti' at (9, 1) (
      across) for 25 points
1556 Greedy AI plays 'volti' at (9, 1) across for 25
      points!
1557
1558 Conservative AI's decision process:
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1559 Choosing to play 'cot' at (8, 2) (down) for 8
      points
1560 Move evaluation score: 26.6
1561 Rack balance after move: 0.79
1562 Conservative AI plays 'cot' at (8, 2) down for 8
      points!
1563 Greedy AI chooses to play 'resow' at (7, 0) (
      across) for 33 points
1564 Greedy AI plays 'resow' at (7, 0) across for 33
      points!
1565
1566 Conservative AI's decision process:
1567 Choosing to play 'ens' at (14, 7) (across) for 21
      points
1568 Move evaluation score: 39.8
1569 Rack balance after move: 0.79
1570 Conservative AI plays 'ens' at (14, 7) across for
      21 points!
1571 Greedy AI chooses to play 'mol' at (12, 6) (down
      ) for 23 points
1572 Greedy AI plays 'mol' at (12, 6) down for 23
      points!
1573
1574 Conservative AI's decision process:
1575 Choosing to play 'jin' at (5, 5) (down) for 35
      points
1576 Move evaluation score: 26.1
1577 Rack balance after move: 0.87
1578 Conservative AI plays 'jin' at (5, 5) down for 35
      points!
1579 Greedy AI chooses to play 'of' at (5, 6) (down)
      for 27 points
1580 Greedy AI plays 'of' at (5, 6) down for 27 points
      !
1581
1582 Conservative AI's decision process:
1583 Choosing to play 'jot' at (5, 5) (across) for 10
      points
1584 Move evaluation score: 26.6
1585 Rack balance after move: 0.69
1586 Conservative AI plays 'jot' at (5, 5) across for
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1586 10 points!
1587 Greedy AI chooses to play 'wud' at (4, 3) (across
    ) for 26 points
1588 Greedy AI plays 'wud' at (4, 3) across for 26
    points!
1589
1590 Conservative AI's decision process:
1591 Choosing to play 'hag' at (6, 1) (across) for 24
    points
1592 Move evaluation score: 26.4
1593 Rack balance after move: 0.79
1594 Conservative AI plays 'hag' at (6, 1) across for
    24 points!
1595 Greedy AI chooses to play 'rax' at (3, 2) (across
    ) for 39 points
1596 Greedy AI plays 'rax' at (3, 2) across for 39
    points!
1597
1598 Conservative AI's decision process:
1599 Choosing to play 'qat' at (2, 1) (across) for 34
    points
1600 Move evaluation score: 28.2
1601 Rack balance after move: 0.77
1602 Conservative AI plays 'qat' at (2, 1) across for
    34 points!
1603 Greedy AI chooses to play 'ay' at (12, 5) (down)
    for 34 points
1604 Greedy AI plays 'ay' at (12, 5) down for 34
    points!
1605
1606 Conservative AI's decision process:
1607 Choosing to play 'the' at (5, 1) (down) for 8
    points
1608 Move evaluation score: 29.2
1609 Rack balance after move: 0.69
1610 Conservative AI plays 'the' at (5, 1) down for 8
    points!
1611 Greedy AI chooses to play 'vender' at (9, 1) (
    down) for 22 points
1612 Greedy AI plays 'vender' at (9, 1) down for 22
    points!
```

```
1613
1614 Conservative AI's decision process:
1615 Choosing to play 'dev' at (12, 1) (across) for 14
    points
1616 Move evaluation score: 37.0
1617 Rack balance after move: 0.69
1618 Conservative AI plays 'dev' at (12, 1) across for
    14 points!
1619 Greedy AI chooses to play 'aigret' at (0, 7) (
    down) for 24 points
1620 Greedy AI plays 'aigret' at (0, 7) down for 24
    points!
1621
1622 Conservative AI's decision process:
1623 Choosing to play 'rip' at (14, 1) (across) for 8
    points
1624 Move evaluation score: 31.0
1625 Rack balance after move: 0.34
1626 Conservative AI plays 'rip' at (14, 1) across for
    8 points!
1627 Greedy AI chooses to play 'hep' at (10, 12) (down
    ) for 20 points
1628 Greedy AI plays 'hep' at (10, 12) down for 20
    points!
1629
1630 Conservative AI's decision process:
1631 Choosing to play 'guaco' at (2, 7) (across) for 9
    points
1632 Move evaluation score: 27.5
1633 Rack balance after move: 0.59
1634 Conservative AI plays 'guaco' at (2, 7) across
    for 9 points!
1635 Greedy AI chooses to play 'seers' at (2, 12) (
    down) for 30 points
1636 Greedy AI plays 'seers' at (2, 12) down for 30
    points!
1637
1638 Conservative AI's decision process:
1639 Choosing to play 'ne' at (3, 11) (across) for 8
    points
1640 Move evaluation score: 27.2
```

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1641 Rack balance after move: 0.34
1642 Conservative AI plays 'ne' at (3, 11) across for
8 points!
1643 Greedy AI chooses to play 'niter' at (11, 9) (
across) for 5 points
1644 Greedy AI plays 'niter' at (11, 9) across for 5
points!
1645
1646 Conservative AI's decision process:
1647 Choosing to play 'ora' at (10, 13) (down) for 12
points
1648 Move evaluation score: 21.6
1649 Rack balance after move: 0.20
1650 Conservative AI plays 'ora' at (10, 13) down for
12 points!
1651 Greedy AI chooses to play 'un' at (11, 0) (across
) for 3 points
1652 Greedy AI plays 'un' at (11, 0) across for 3
points!
1653 Conservative AI plays 'wit' at (7, 4) down for 6
points!
1654 No moves available for Greedy AI. Skipping turn.
1655 Conservative AI plays 'ion' at (1, 11) down for 3
points!
1656 No moves available for Greedy AI. Skipping turn.
1657 Conservative AI plays 'ai' at (0, 7) across for 2
points!
1658 No moves available for Greedy AI. Skipping turn.
1659 Conservative AI plays 'ut' at (5, 0) across for 2
points!
1660 No moves available for Greedy AI. Skipping turn.
1661 No moves available for Conservative AI. Skipping
turn.
1662
1663 Neither player has any available moves. Game
ending.
1664
1665 --- GAME OVER ---
1666 Final Board:
1667 -----ai-----
1668 -----i__i___
```

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1669 _qat___guacos__  
1670 __rax__r___ne__  
1671 ___wud_e_____e__  
1672 ut___jot____r__  
1673 _hag_if_k___s__  
1674 resown_del_____  
1675 __c_i___yon_____  
1676 _volti___zoa___  
1677 _et__fibbed_ho_  
1678 un_____l_niter_  
1679 _dev_ama_g__pa_  
1680 _e___yom_e_____  
1681 _rip__lens_____  
1682 Board saved to 'assets/game_output.png'  
1683  
1684 Final Scores:  
1685 Greedy AI: 4407 points  
1686 Conservative AI: 552 points  
1687  
1688 Greedy AI wins!  
1689  
1690 Game 3/5  
1691 Greedy AI starts the game!  
1692 Greedy AI plays 'ai' at (7, 7) across for 2  
    points!  
1693 Greedy AI chooses to play 'petit' at (6, 8) (across)  
    for 18 points  
1694 Greedy AI plays 'petit' at (6, 8) across for 18  
    points!  
1695  
1696 Conservative AI's decision process:  
1697 Choosing to play 'bi' at (5, 9) (across) for 22  
    points  
1698 Move evaluation score: 28.6  
1699 Rack balance after move: 0.53  
1700 Conservative AI plays 'bi' at (5, 9) across for  
    22 points!  
1701 Greedy AI chooses to play 'hum' at (4, 10) (across)  
    for 28 points  
1702 Greedy AI plays 'hum' at (4, 10) across for 28  
    points!
```

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1703
1704 Conservative AI's decision process:
1705 Choosing to play 'bel' at (5, 9) (down) for 8
    points
1706 Move evaluation score: 26.6
1707 Rack balance after move: 0.67
1708 Conservative AI plays 'bel' at (5, 9) down for 8
    points!
1709 Greedy AI chooses to play 'daze' at (7, 11) (
    across) for 55 points
1710 Greedy AI plays 'daze' at (7, 11) across for 55
    points!
1711
1712 Conservative AI's decision process:
1713 Choosing to play 'it' at (8, 7) (across) for 11
    points
1714 Move evaluation score: 27.2
1715 Rack balance after move: 0.77
1716 Conservative AI plays 'it' at (8, 7) across for
    11 points!
1717 Greedy AI chooses to play 'taco' at (9, 7) (
    across) for 21 points
1718 Greedy AI plays 'taco' at (9, 7) across for 21
    points!
1719
1720 Conservative AI's decision process:
1721 Choosing to play 'join' at (8, 10) (down) for 22
    points
1722 Move evaluation score: 30.4
1723 Rack balance after move: 0.69
1724 Conservative AI plays 'join' at (8, 10) down for
    22 points!
1725 Greedy AI chooses to play 'orgy' at (11, 11) (
    down) for 28 points
1726 Greedy AI plays 'orgy' at (11, 11) down for 28
    points!
1727
1728 Conservative AI's decision process:
1729 Choosing to play 'yins' at (14, 11) (across) for
    21 points
1730 Move evaluation score: 31.5
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1731 Rack balance after move: 0.44
1732 Conservative AI plays 'yins' at (14, 11) across
    for 21 points!
1733 Greedy AI chooses to play 'entrain' at (12, 8) (
    across) for 28 points
1734 Greedy AI plays 'entrain' at (12, 8) across for
    28 points!
1735
1736 Conservative AI's decision process:
1737 Choosing to play 'firn' at (11, 13) (down) for 14
    points
1738 Move evaluation score: 24.8
1739 Rack balance after move: 0.50
1740 Conservative AI plays 'firn' at (11, 13) down for
    14 points!
1741 Greedy AI chooses to play 'vroom' at (0, 12) (
    down) for 20 points
1742 Greedy AI plays 'vroom' at (0, 12) down for 20
    points!
1743
1744 Conservative AI's decision process:
1745 Choosing to play 'vas' at (0, 12) (across) for 18
    points
1746 Move evaluation score: 38.2
1747 Rack balance after move: 0.79
1748 Conservative AI plays 'vas' at (0, 12) across for
    18 points!
1749 Greedy AI chooses to play 'largo' at (1, 10) (
    across) for 20 points
1750 Greedy AI plays 'largo' at (1, 10) across for 20
    points!
1751
1752 Conservative AI's decision process:
1753 Choosing to play 'soya' at (0, 14) (down) for 8
    points
1754 Move evaluation score: 36.3
1755 Rack balance after move: 0.87
1756 Conservative AI plays 'soya' at (0, 14) down for
    8 points!
1757 Greedy AI chooses to play 'xerus' at (10, 3) (
    across) for 28 points
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1758 Greedy AI plays 'xerus' at (10, 3) across for 28
    points!
1759
1760 Conservative AI's decision process:
1761 Choosing to play 'exec' at (9, 3) (down) for 26
    points
1762 Move evaluation score: 32.0
1763 Rack balance after move: 0.77
1764 Conservative AI plays 'exec' at (9, 3) down for
    26 points!
1765 Greedy AI chooses to play 'dink' at (5, 6) (down
    ) for 31 points
1766 Greedy AI plays 'dink' at (5, 6) down for 31
    points!
1767
1768 Conservative AI's decision process:
1769 Choosing to play 'eme' at (11, 3) (across) for 11
    points
1770 Move evaluation score: 39.3
1771 Rack balance after move: 0.87
1772 Conservative AI plays 'eme' at (11, 3) across for
    11 points!
1773 Greedy AI chooses to play 'forced' at (12, 0) (
    across) for 33 points
1774 Greedy AI plays 'forced' at (12, 0) across for 33
    points!
1775
1776 Conservative AI's decision process:
1777 Choosing to play 'ah' at (13, 0) (across) for 25
    points
1778 Move evaluation score: 37.0
1779 Rack balance after move: 0.87
1780 Conservative AI plays 'ah' at (13, 0) across for
    25 points!
1781 Greedy AI chooses to play 'dove' at (14, 0) (
    across) for 54 points
1782 Greedy AI plays 'dove' at (14, 0) across for 54
    points!
1783
1784 Conservative AI's decision process:
1785 Choosing to play 'doven' at (14, 0) (across) for
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1785 9 points
1786 Move evaluation score: 39.8
1787 Rack balance after move: 0.87
1788 Conservative AI plays 'doven' at (14, 0) across
    for 9 points!
1789 Greedy AI chooses to play 'quit' at (3, 5) (down
    ) for 22 points
1790 Greedy AI plays 'quit' at (3, 5) down for 22
    points!
1791
1792 Conservative AI's decision process:
1793 Choosing to play 'snail' at (7, 5) (across) for
    19 points
1794 Move evaluation score: 35.2
1795 Rack balance after move: 0.87
1796 Conservative AI plays 'snail' at (7, 5) across
    for 19 points!
1797 Greedy AI chooses to play 'boule' at (0, 6) (
    across) for 23 points
1798 Greedy AI plays 'boule' at (0, 6) across for 23
    points!
1799
1800 Conservative AI's decision process:
1801 Choosing to play 'hump' at (4, 10) (across) for
    11 points
1802 Move evaluation score: 32.0
1803 Rack balance after move: 0.87
1804 Conservative AI plays 'hump' at (4, 10) across
    for 11 points!
1805 Greedy AI chooses to play 'wo' at (2, 11) (across
    ) for 10 points
1806 Greedy AI plays 'wo' at (2, 11) across for 10
    points!
1807
1808 Conservative AI's decision process:
1809 Choosing to play 'fa' at (11, 13) (across) for 9
    points
1810 Move evaluation score: 28.8
1811 Rack balance after move: 0.80
1812 Conservative AI plays 'fa' at (11, 13) across for
    9 points!
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1813 Greedy AI chooses to play 'whit' at (3, 10) (down
    ) for 10 points
1814 Greedy AI plays 'whit' at (3, 10) down for 10
    points!
1815
1816 Conservative AI's decision process:
1817 Choosing to play 'el' at (13, 5) (across) for 11
    points
1818 Move evaluation score: 24.0
1819 Rack balance after move: 0.90
1820 Conservative AI plays 'el' at (13, 5) across for
    11 points!
1821 No moves available for Greedy AI. Skipping turn.
1822
1823 Conservative AI's decision process:
1824 Choosing to play 'prez' at (4, 13) (down) for 25
    points
1825 Move evaluation score: 15.7
1826 Rack balance after move: 0.93
1827 Conservative AI plays 'prez' at (4, 13) down for
    25 points!
1828 No moves available for Greedy AI. Skipping turn.
1829 Conservative AI plays 'tag' at (6, 12) down for 6
    points!
1830 No moves available for Greedy AI. Skipping turn.
1831 No moves available for Conservative AI. Skipping
    turn.
1832
1833 Neither player has any available moves. Game
    ending.
1834
1835 --- GAME OVER ---
1836 Final Board:
1837 _____boule_vas
1838 _____largo
1839 _____wo_y
1840 _____q_____w_o_a
1841 _____u_____hump_
1842 _____id__bi__r_
1843 _____ti_petite_
1844 _____snail_daze
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```
1845 -----kit_j_g--  
1846 __e__taco_____  
1847 __xerus_i_____  
1848 __eme____no_fa  
1849 forced_entrain  
1850 ah__el____g_r_  
1851 doven_____yins  
1852 Board saved to 'assets/game_output.png'  
1853  
1854 Final Scores:  
1855 Conservative AI: 828 points  
1856 Greedy AI: 4838 points  
1857  
1858 Greedy AI wins!  
1859  
1860 Game 4/5  
1861 Conservative AI starts the game!  
1862 Conservative AI plays 'or' at (7, 7) across for 2  
    points!  
1863  
1864 Conservative AI's decision process:  
1865 Choosing to play 'dev' at (6, 7) (across) for 14  
    points  
1866 Move evaluation score: 26.6  
1867 Rack balance after move: 0.89  
1868 Conservative AI plays 'dev' at (6, 7) across for  
    14 points!  
1869 Greedy AI chooses to play 'nertz' at (5, 8) (down  
    ) for 15 points  
1870 Greedy AI plays 'nertz' at (5, 8) down for 15  
    points!  
1871  
1872 Conservative AI's decision process:  
1873 Choosing to play 'ave' at (5, 9) (down) for 15  
    points  
1874 Move evaluation score: 32.4  
1875 Rack balance after move: 0.83  
1876 Conservative AI plays 'ave' at (5, 9) down for 15  
    points!  
1877 Greedy AI chooses to play 'paws' at (3, 10) (down  
    ) for 32 points
```

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1878 Greedy AI plays 'paws' at (3, 10) down for 32
    points!
1879
1880 Conservative AI's decision process:
1881 Choosing to play 'tret' at (8, 8) (across) for 11
    points
1882 Move evaluation score: 34.0
1883 Rack balance after move: 0.97
1884 Conservative AI plays 'tret' at (8, 8) across for
    11 points!
1885 Greedy AI chooses to play 'cube' at (0, 11) (down)
    ) for 30 points
1886 Greedy AI plays 'cube' at (0, 11) down for 30
    points!
1887
1888 Conservative AI's decision process:
1889 Choosing to play 'clip' at (0, 11) (across) for
    24 points
1890 Move evaluation score: 40.5
1891 Rack balance after move: 0.87
1892 Conservative AI plays 'clip' at (0, 11) across
    for 24 points!
1893 Greedy AI chooses to play 'ah' at (2, 12) (down)
    for 26 points
1894 Greedy AI plays 'ah' at (2, 12) down for 26
    points!
1895
1896 Conservative AI's decision process:
1897 Choosing to play 'bake' at (2, 11) (across) for
    10 points
1898 Move evaluation score: 36.5
1899 Rack balance after move: 0.83
1900 Conservative AI plays 'bake' at (2, 11) across
    for 10 points!
1901 Greedy AI chooses to play 'friz' at (9, 5) (
    across) for 24 points
1902 Greedy AI plays 'friz' at (9, 5) across for 24
    points!
1903
1904 Conservative AI's decision process:
1905 Choosing to play 'li' at (1, 13) (across) for 23
```

```
1905 points
1906 Move evaluation score: 41.5
1907 Rack balance after move: 0.59
1908 Conservative AI plays 'li' at (1, 13) across for
23 points!
1909 Greedy AI chooses to play 'enjoys' at (8, 10) (
down) for 32 points
1910 Greedy AI plays 'enjoys' at (8, 10) down for 32
points!
1911
1912 Conservative AI's decision process:
1913 Choosing to play 'ilks' at (0, 13) (down) for 17
points
1914 Move evaluation score: 41.0
1915 Rack balance after move: 0.59
1916 Conservative AI plays 'ilks' at (0, 13) down for
17 points!
1917 Greedy AI chooses to play 'ugly' at (7, 11) (
across) for 30 points
1918 Greedy AI plays 'ugly' at (7, 11) across for 30
points!
1919
1920 Conservative AI's decision process:
1921 Choosing to play 'jo' at (10, 10) (across) for 9
points
1922 Move evaluation score: 38.5
1923 Rack balance after move: 0.44
1924 Conservative AI plays 'jo' at (10, 10) across for
9 points!
1925 Greedy AI chooses to play 'infare' at (9, 7) (
down) for 39 points
1926 Greedy AI plays 'infare' at (9, 7) down for 39
points!
1927
1928 Conservative AI's decision process:
1929 Choosing to play 'ab' at (4, 10) (across) for 15
points
1930 Move evaluation score: 41.5
1931 Rack balance after move: 0.69
1932 Conservative AI plays 'ab' at (4, 10) across for
15 points!
```

1933 Greedy AI chooses to play 'wham' at (10, 12) (down) for 37 points
1934 Greedy AI plays 'wham' at (10, 12) down for 37 points!
1935
1936 Conservative AI's decision process:
1937 Choosing to play 'aba' at (4, 10) (across) for 11 points
1938 Move evaluation score: 40.5
1939 Rack balance after move: 0.69
1940 Conservative AI plays 'aba' at (4, 10) across for 11 points!
1941 Greedy AI chooses to play 'aged' at (11, 13) (down) for 28 points
1942 Greedy AI plays 'aged' at (11, 13) down for 28 points!
1943
1944 Conservative AI's decision process:
1945 Choosing to play 'ode' at (14, 12) (across) for 25 points
1946 Move evaluation score: 45.5
1947 Rack balance after move: 0.83
1948 Conservative AI plays 'ode' at (14, 12) across for 25 points!
1949 Greedy AI chooses to play 'quintar' at (12, 2) (across) for 36 points
1950 Greedy AI plays 'quintar' at (12, 2) across for 36 points!
1951
1952 Conservative AI's decision process:
1953 Choosing to play 'had' at (11, 12) (across) for 9 points
1954 Move evaluation score: 40.5
1955 Rack balance after move: 0.97
1956 Conservative AI plays 'had' at (11, 12) across for 9 points!
1957 Greedy AI chooses to play 'exacta' at (10, 0) (across) for 35 points
1958 Greedy AI plays 'exacta' at (10, 0) across for 35 points!
1959

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1960 Conservative AI's decision process:  
1961 Choosing to play 'regs' at (13, 7) (across) for  
    11 points  
1962 Move evaluation score: 38.5  
1963 Rack balance after move: 0.97  
1964 Conservative AI plays 'regs' at (13, 7) across  
    for 11 points!  
1965 Greedy AI chooses to play 'ivied' at (7, 0) (down  
    ) for 33 points  
1966 Greedy AI plays 'ivied' at (7, 0) down for 33  
    points!  
1967  
1968 Conservative AI's decision process:  
1969 Choosing to play 'fino' at (11, 7) (across) for  
    10 points  
1970 Move evaluation score: 38.0  
1971 Rack balance after move: 0.77  
1972 Conservative AI plays 'fino' at (11, 7) across  
    for 10 points!  
1973 Greedy AI chooses to play 'court' at (10, 3) (down)  
    for 16 points  
1974 Greedy AI plays 'court' at (10, 3) down for 16  
    points!  
1975  
1976 Conservative AI's decision process:  
1977 Choosing to play 'ion' at (9, 0) (across) for 18  
    points  
1978 Move evaluation score: 42.8  
1979 Rack balance after move: 0.97  
1980 Conservative AI plays 'ion' at (9, 0) across for  
    18 points!  
1981 Greedy AI chooses to play 'emote' at (14, 0) (across)  
    for 21 points  
1982 Greedy AI plays 'emote' at (14, 0) across for 21  
    points!  
1983  
1984 Conservative AI's decision process:  
1985 Choosing to play 'um' at (13, 1) (down) for 8  
    points  
1986 Move evaluation score: 24.8  
1987 Rack balance after move: 1.00
```

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1988 Conservative AI plays 'um' at (13, 1) down for 8
    points!
1989 Greedy AI chooses to play 'do' at (11, 0) (across
    ) for 13 points
1990 Greedy AI plays 'do' at (11, 0) across for 13
    points!
1991
1992 Conservative AI's decision process:
1993 Choosing to play 'faints' at (9, 5) (down) for 19
    points
1994 Move evaluation score: 17.2
1995 Rack balance after move: 0.85
1996 Conservative AI plays 'faints' at (9, 5) down for
    19 points!
1997 Greedy AI chooses to play 'id' at (10, 14) (down
    ) for 3 points
1998 Greedy AI plays 'id' at (10, 14) down for 3
    points!
1999 Conservative AI plays 'lode' at (14, 11) across
    for 6 points!
2000 No moves available for Greedy AI. Skipping turn.
2001 No moves available for Conservative AI. Skipping
    turn.
2002
2003 Neither player has any available moves. Game
    ending.
2004
2005 --- GAME OVER ---
2006 Final Board:
2007 _____clip
2008 _____u_li
2009 _____bake
2010 _____pehs_
2011 _____aba__
2012 _____naw_____
2013 _____devs_____
2014 i_____ore_ugly
2015 v_____tret_____
2016 ion__friz_n_____
2017 exacta_n__jow_i
2018 do_o_i_fino_had
```

```
2019 __quintar_y_ag_
2020 _u_r_t_regs_me_
2021 emotes_e___lode
2022 Board saved to 'assets/game_output.png'
2023
2024 Final Scores:
2025 Conservative AI: 1085 points
2026 Greedy AI: 5288 points
2027
2028 Greedy AI wins!
2029
2030 Game 5/5
2031 Greedy AI starts the game!
2032 Greedy AI plays 'ta' at (7, 7) across for 2
    points!
2033 Greedy AI chooses to play 'refs' at (6, 6) (
    across) for 23 points
2034 Greedy AI plays 'refs' at (6, 6) across for 23
    points!
2035
2036 Conservative AI's decision process:
2037 Choosing to play 'ag' at (8, 7) (across) for 17
    points
2038 Move evaluation score: 31.4
2039 Rack balance after move: 0.63
2040 Conservative AI plays 'ag' at (8, 7) across for
    17 points!
2041 Greedy AI chooses to play 'reb' at (6, 6) (down)
    for 20 points
2042 Greedy AI plays 'reb' at (6, 6) down for 20
    points!
2043
2044 Conservative AI's decision process:
2045 Choosing to play 'ai' at (5, 9) (across) for 8
    points
2046 Move evaluation score: 30.2
2047 Rack balance after move: 0.73
2048 Conservative AI plays 'ai' at (5, 9) across for 8
    points!
2049 Greedy AI chooses to play 'spiv' at (9, 8) (
    across) for 23 points
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2050 Greedy AI plays 'spiv' at (9, 8) across for 23
    points!
2051
2052 Conservative AI's decision process:
2053 Choosing to play 'evil' at (8, 11) (down) for 14
    points
2054 Move evaluation score: 29.0
2055 Rack balance after move: 0.63
2056 Conservative AI plays 'evil' at (8, 11) down for
    14 points!
2057 Greedy AI chooses to play 'matey' at (4, 9) (
    across) for 29 points
2058 Greedy AI plays 'matey' at (4, 9) across for 29
    points!
2059
2060 Conservative AI's decision process:
2061 Choosing to play 'ae' at (5, 13) (across) for 11
    points
2062 Move evaluation score: 28.4
2063 Rack balance after move: 0.83
2064 Conservative AI plays 'ae' at (5, 13) across for
    11 points!
2065 Greedy AI chooses to play 'fice' at (10, 10) (
    across) for 28 points
2066 Greedy AI plays 'fice' at (10, 10) across for 28
    points!
2067
2068 Conservative AI's decision process:
2069 Choosing to play 'jess' at (9, 13) (down) for 27
    points
2070 Move evaluation score: 33.6
2071 Rack balance after move: 0.79
2072 Conservative AI plays 'jess' at (9, 13) down for
    27 points!
2073 Greedy AI chooses to play 'intine' at (13, 8) (
    across) for 40 points
2074 Greedy AI plays 'intine' at (13, 8) across for 40
    points!
2075
2076 Conservative AI's decision process:
2077 Choosing to play 'do' at (14, 13) (across) for 23
```

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2077 points
2078 Move evaluation score: 44.5
2079 Rack balance after move: 0.97
2080 Conservative AI plays 'do' at (14, 13) across for
    23 points!
2081 Greedy AI chooses to play 'dart' at (7, 11) (
    across) for 32 points
2082 Greedy AI plays 'dart' at (7, 11) across for 32
    points!
2083
2084 Conservative AI's decision process:
2085 Choosing to play 'in' at (14, 10) (across) for 8
    points
2086 Move evaluation score: 35.5
2087 Rack balance after move: 0.87
2088 Conservative AI plays 'in' at (14, 10) across for
    8 points!
2089 Greedy AI chooses to play 'droit' at (14, 4) (
    across) for 20 points
2090 Greedy AI plays 'droit' at (14, 4) across for 20
    points!
2091
2092 Conservative AI's decision process:
2093 Choosing to play 'eh' at (8, 11) (across) for 18
    points
2094 Move evaluation score: 43.5
2095 Rack balance after move: 0.87
2096 Conservative AI plays 'eh' at (8, 11) across for
    18 points!
2097 Greedy AI chooses to play 'cola' at (11, 3) (down
    ) for 22 points
2098 Greedy AI plays 'cola' at (11, 3) down for 22
    points!
2099
2100 Conservative AI's decision process:
2101 Choosing to play 'us' at (12, 12) (across) for 8
    points
2102 Move evaluation score: 30.8
2103 Rack balance after move: 0.63
2104 Conservative AI plays 'us' at (12, 12) across for
    8 points!
```

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2105 Greedy AI chooses to play 'brevet' at (0, 12) (down) for 25 points
2106 Greedy AI plays 'brevet' at (0, 12) down for 25 points!
2107
2108 Conservative AI's decision process:
2109 Choosing to play 'bug' at (0, 12) (across) for 18 points
2110 Move evaluation score: 40.5
2111 Rack balance after move: 0.77
2112 Conservative AI plays 'bug' at (0, 12) across for 18 points!
2113 Greedy AI chooses to play 'rho' at (1, 12) (across) for 25 points
2114 Greedy AI plays 'rho' at (1, 12) across for 25 points!
2115
2116 Conservative AI's decision process:
2117 Choosing to play 'zit' at (12, 8) (down) for 22 points
2118 Move evaluation score: 34.4
2119 Rack balance after move: 0.79
2120 Conservative AI plays 'zit' at (12, 8) down for 22 points!
2121 Greedy AI chooses to play 'doze' at (12, 6) (across) for 18 points
2122 Greedy AI plays 'doze' at (12, 6) across for 18 points!
2123
2124 Conservative AI's decision process:
2125 Choosing to play 'gorp' at (0, 14) (down) for 10 points
2126 Move evaluation score: 36.5
2127 Rack balance after move: 0.79
2128 Conservative AI plays 'gorp' at (0, 14) down for 10 points!
2129 Greedy AI chooses to play 'luna' at (9, 5) (down) for 21 points
2130 Greedy AI plays 'luna' at (9, 5) down for 21 points!
2131
```

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2132 Conservative AI's decision process:  
2133 Choosing to play 'naw' at (11, 5) (across) for 22  
    points  
2134 Move evaluation score: 42.5  
2135 Rack balance after move: 0.83  
2136 Conservative AI plays 'naw' at (11, 5) across for  
    22 points!  
2137 Greedy AI chooses to play 'ex' at (9, 4) (down)  
    for 38 points  
2138 Greedy AI plays 'ex' at (9, 4) down for 38 points  
!  
2139  
2140 Conservative AI's decision process:  
2141 Choosing to play 'jo' at (9, 13) (across) for 9  
    points  
2142 Move evaluation score: 31.2  
2143 Rack balance after move: 0.83  
2144 Conservative AI plays 'jo' at (9, 13) across for  
    9 points!  
2145 Greedy AI chooses to play 'ye' at (12, 2) (down)  
    for 22 points  
2146 Greedy AI plays 'ye' at (12, 2) down for 22  
    points!  
2147  
2148 Conservative AI's decision process:  
2149 Choosing to play 'kex' at (8, 4) (down) for 14  
    points  
2150 Move evaluation score: 33.2  
2151 Rack balance after move: 0.97  
2152 Conservative AI plays 'kex' at (8, 4) down for 14  
    points!  
2153 Greedy AI chooses to play 'mi' at (13, 1) (down)  
    for 18 points  
2154 Greedy AI plays 'mi' at (13, 1) down for 18  
    points!  
2155  
2156 Conservative AI's decision process:  
2157 Choosing to play 'rec' at (11, 1) (across) for 11  
    points  
2158 Move evaluation score: 23.7  
2159 Rack balance after move: 0.97
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2160 Conservative AI plays 'rec' at (11, 1) across for
    11 points!
2161 Greedy AI chooses to play 'nook' at (8, 1) (
    across) for 9 points
2162 Greedy AI plays 'nook' at (8, 1) across for 9
    points!
2163
2164 Conservative AI's decision process:
2165 Choosing to play 'wo' at (7, 3) (down) for 9
    points
2166 Move evaluation score: 26.4
2167 Rack balance after move: 1.00
2168 Conservative AI plays 'wo' at (7, 3) down for 9
    points!
2169 Greedy AI chooses to play 'ne' at (2, 11) (across
    ) for 2 points
2170 Greedy AI plays 'ne' at (2, 11) across for 2
    points!
2171
2172 Conservative AI's decision process:
2173 Choosing to play 'gel' at (9, 3) (across) for 11
    points
2174 Move evaluation score: 22.8
2175 Rack balance after move: 0.90
2176 Conservative AI plays 'gel' at (9, 3) across for
    11 points!
2177 No moves available for Greedy AI. Skipping turn.
2178
2179 Conservative AI's decision process:
2180 Choosing to play 'li' at (7, 0) (across) for 8
    points
2181 Move evaluation score: 9.3
2182 Rack balance after move: 0.73
2183 Conservative AI plays 'li' at (7, 0) across for 8
    points!
2184 No moves available for Greedy AI. Skipping turn.
2185 No moves available for Conservative AI. Skipping
    turn.
2186
2187 Neither player has any available moves. Game
    ending.
```

```
2188
2189 --- GAME OVER ---
2190 Final Board:
2191 -----bug
2192 -----rho
2193 -----ne_r
2194 -----v_p
2195 -----matey_
2196 -----ai_tae
2197 -----refs-----
2198 li_w__eta__dart
2199 _nook_bag__eh__
2200 __gel__spiv_jo
2201 ___xu___fice_
2202 _rec_naw___l_s_
2203 __yo_adoze__us_
2204 _mel___intine_
2205 _i_adroit_in_do
2206 Board saved to 'assets/game_output.png'
2207
2208 Final Scores:
2209 Conservative AI: 1353 points
2210 Greedy AI: 5705 points
2211
2212 Greedy AI wins!
2213
2214 Playing matches between Adversarial AI and MCTS
    AI
2215
2216 Game 1/5
2217 Adversarial AI starts the game!
2218 Adversarial AI plays 'fa' at (7, 7) across for 5
    points!
2219 Adversarial AI chooses to play 'daut' at (6, 8) (
    down) for 8 points
2220 This move limits opponent's maximum potential
    score to 24 points
2221 Adversarial AI plays 'daut' at (6, 8) down for 8
    points!
2222
2223 MCTS AI's decision process:
```

2224 Choosing to play 'rued' at (4, 9) (down) for 17 points
2225 Expected net score advantage: -8.9 points
2226 Based on 10 simulated opponent responses
2227 MCTS AI plays 'rued' at (4, 9) down for 17 points!
2228 Adversarial AI chooses to play 'ern' at (4, 8) (across) for 6 points
2229 This move limits opponent's maximum potential score to 18 points
2230 Adversarial AI plays 'ern' at (4, 8) across for 6 points!
2231
2232 MCTS AI's decision process:
2233 Choosing to play 'woe' at (6, 10) (down) for 21 points
2234 Expected net score advantage: -5.4 points
2235 Based on 10 simulated opponent responses
2236 MCTS AI plays 'woe' at (6, 10) down for 21 points!
2237 Adversarial AI chooses to play 'nth' at (3, 7) (down) for 11 points
2238 This move limits opponent's maximum potential score to 18 points
2239 Adversarial AI plays 'nth' at (3, 7) down for 11 points!
2240
2241 MCTS AI's decision process:
2242 Choosing to play 'aery' at (3, 11) (down) for 30 points
2243 Expected net score advantage: 6.8 points
2244 Based on 10 simulated opponent responses
2245 MCTS AI plays 'aery' at (3, 11) down for 30 points!
2246 Adversarial AI chooses to play 'he' at (2, 12) (down) for 12 points
2247 This move limits opponent's maximum potential score to 26 points
2248 Adversarial AI plays 'he' at (2, 12) down for 12 points!
2249

```
2250 MCTS AI's decision process:  
2251 Choosing to play 'kors' at (1, 9) (across) for 24  
    points  
2252 Expected net score advantage: 3.1 points  
2253 Based on 10 simulated opponent responses  
2254 MCTS AI plays 'kors' at (1, 9) across for 24  
    points!  
2255 Adversarial AI chooses to play 'ziti' at (9, 6) (across)  
    for 15 points  
2256 This move limits opponent's maximum potential  
    score to 22 points  
2257 Adversarial AI plays 'ziti' at (9, 6) across for  
    15 points!  
2258  
2259 MCTS AI's decision process:  
2260 Choosing to play 'ox' at (5, 6) (down) for 22  
    points  
2261 Expected net score advantage: -2.6 points  
2262 Based on 10 simulated opponent responses  
2263 MCTS AI plays 'ox' at (5, 6) down for 22 points!  
2264 Adversarial AI chooses to play 'peg' at (5, 5) (down)  
    for 35 points  
2265 This move limits opponent's maximum potential  
    score to 20 points  
2266 Adversarial AI plays 'peg' at (5, 5) down for 35  
    points!  
2267  
2268 MCTS AI's decision process:  
2269 Choosing to play 'epigon' at (3, 2) (across) for  
    18 points  
2270 Expected net score advantage: -7.6 points  
2271 Based on 10 simulated opponent responses  
2272 MCTS AI plays 'epigon' at (3, 2) across for 18  
    points!  
2273 Adversarial AI chooses to play 'jells' at (2, 2)  
    (down) for 26 points  
2274 This move limits opponent's maximum potential  
    score to 20 points  
2275 Adversarial AI plays 'jells' at (2, 2) down for  
    26 points!  
2276
```

2277 MCTS AI's decision process:
2278 Choosing to play 'lab' at (2, 4) (across) for 20 points
2279 Expected net score advantage: -4.7 points
2280 Based on 10 simulated opponent responses
2281 MCTS AI plays 'lab' at (2, 4) across for 20 points!
2282 Adversarial AI chooses to play 'lin' at (4, 2) (across) for 16 points
2283 This move limits opponent's maximum potential score to 27 points
2284 Adversarial AI plays 'lin' at (4, 2) across for 16 points!
2285
2286 MCTS AI's decision process:
2287 Choosing to play 'ragee' at (6, 4) (down) for 25 points
2288 Expected net score advantage: -3.2 points
2289 Based on 10 simulated opponent responses
2290 MCTS AI plays 'ragee' at (6, 4) down for 25 points!
2291 Adversarial AI chooses to play 'rag' at (1, 5) (down) for 6 points
2292 This move limits opponent's maximum potential score to 31 points
2293 Adversarial AI plays 'rag' at (1, 5) down for 6 points!
2294
2295 MCTS AI's decision process:
2296 Choosing to play 'ocean' at (0, 4) (across) for 28 points
2297 Expected net score advantage: 2.5 points
2298 Based on 10 simulated opponent responses
2299 MCTS AI plays 'ocean' at (0, 4) across for 28 points!
2300 Adversarial AI chooses to play 'ziti' at (9, 6) (down) for 14 points
2301 This move limits opponent's maximum potential score to 24 points
2302 Adversarial AI plays 'ziti' at (9, 6) down for 14 points!

2303
2304 MCTS AI's decision process:
2305 Choosing to play 'dew' at (12, 7) (down) for 24 points
2306 Expected net score advantage: -4.8 points
2307 Based on 10 simulated opponent responses
2308 MCTS AI plays 'dew' at (12, 7) down for 24 points!
2309 Adversarial AI chooses to play 'my' at (12, 5) (down) for 21 points
2310 This move limits opponent's maximum potential score to 29 points
2311 Adversarial AI plays 'my' at (12, 5) down for 21 points!
2312
2313 MCTS AI's decision process:
2314 Choosing to play 'vie' at (2, 8) (down) for 20 points
2315 Expected net score advantage: -7.2 points
2316 Based on 10 simulated opponent responses
2317 MCTS AI plays 'vie' at (2, 8) down for 20 points!
2318 Adversarial AI chooses to play 'aa' at (12, 4) (down) for 14 points
2319 This move limits opponent's maximum potential score to 17 points
2320 Adversarial AI plays 'aa' at (12, 4) down for 14 points!
2321
2322 MCTS AI's decision process:
2323 Choosing to play 'flu' at (5, 1) (across) for 19 points
2324 Expected net score advantage: -7.5 points
2325 Based on 10 simulated opponent responses
2326 MCTS AI plays 'flu' at (5, 1) across for 19 points!
2327 Adversarial AI chooses to play 'zitis' at (9, 6) (across) for 21 points
2328 This move limits opponent's maximum potential score to 21 points
2329 Adversarial AI plays 'zitis' at (9, 6) across for 21 points!

2330
2331 MCTS AI's decision process:
2332 Choosing to play 'mu' at (13, 3) (down) for 13 points
2333 Expected net score advantage: -10.0 points
2334 Based on 10 simulated opponent responses
2335 MCTS AI plays 'mu' at (13, 3) down for 13 points!
2336 Adversarial AI chooses to play 'lot' at (11, 8) (down) for 15 points
2337 This move limits opponent's maximum potential score to 13 points
2338 Adversarial AI plays 'lot' at (11, 8) down for 15 points!
2339
2340 MCTS AI's decision process:
2341 Choosing to play 'bag' at (7, 3) (across) for 9 points
2342 Expected net score advantage: -6.6 points
2343 Based on 10 simulated opponent responses
2344 MCTS AI plays 'bag' at (7, 3) across for 9 points!
2345 Adversarial AI chooses to play 'vig' at (8, 2) (across) for 15 points
2346 This move limits opponent's maximum potential score to 14 points
2347 Adversarial AI plays 'vig' at (8, 2) across for 15 points!
2348
2349 MCTS AI's decision process:
2350 Choosing to play 'birds' at (7, 3) (down) for 21 points
2351 Expected net score advantage: 9.4 points
2352 Based on 10 simulated opponent responses
2353 MCTS AI plays 'birds' at (7, 3) down for 21 points!
2354 Adversarial AI chooses to play 'coo' at (0, 10) (down) for 5 points
2355 This move limits opponent's maximum potential score to 11 points
2356 Adversarial AI plays 'coo' at (0, 10) down for 5 points!

2357
2358 MCTS AI's decision process:
2359 Choosing to play 'twat' at (14, 6) (across) for
11 points
2360 Expected net score advantage: 3.0 points
2361 Based on 10 simulated opponent responses
2362 MCTS AI plays 'twat' at (14, 6) across for 11
points!
2363 Adversarial AI chooses to play 'eta' at (13, 7) (across)
for 9 points
2364 This move limits opponent's maximum potential
score to 4 points
2365 Adversarial AI plays 'eta' at (13, 7) across for
9 points!
2366
2367 MCTS AI's decision process:
2368 Choosing to play 'in' at (10, 6) (across) for 4
points
2369 Expected net score advantage: -4.0 points
2370 Based on 10 simulated opponent responses
2371 MCTS AI plays 'in' at (10, 6) across for 4 points
!
2372 Adversarial AI chooses to play 'roe' at (5, 11) (across)
for 5 points
2373 This move limits opponent's maximum potential
score to 2 points
2374 Adversarial AI plays 'roe' at (5, 11) across for
5 points!
2375
2376 MCTS AI's decision process:
2377 Choosing to play 'en' at (8, 10) (across) for 2
points
2378 Expected net score advantage: -3.0 points
2379 Based on 10 simulated opponent responses
2380 MCTS AI plays 'en' at (8, 10) across for 2 points
!
2381 Adversarial AI chooses to play 'hi' at (2, 12) (across)
for 5 points
2382 This move limits opponent's maximum potential
score to 0 points
2383 Adversarial AI plays 'hi' at (2, 12) across for 5

```
2383 points!
2384 No moves available for MCTS AI. Skipping turn.
2385 No moves available for Adversarial AI. Skipping
turn.
2386
2387 Neither player has any available moves. Game
ending.
2388
2389 --- GAME OVER ---
2390 Final Board:
2391 ____ocean_c_____
2392 ____r__kors__
2393 __j_lab_v_o_hi_
2394 __epigoni__ae__
2395 __lin__terne___
2396 _flu_poh_u_roe_
2397 __s_rex_dewy___
2398 ___bag_fado_____
2399 __vig__u_en___
2400 __re_zitis_____
2401 __de_in_____
2402 __s__t_l_____
2403 ____amido_____
2404 __may_eta_____
2405 __u__twat_____
2406 Board saved to 'assets/game_output.png'
2407
2408 Final Scores:
2409 MCTS AI: 1849 points
2410 Adversarial AI: 1582 points
2411
2412 MCTS AI wins!
2413
2414 Game 2/5
2415 Adversarial AI starts the game!
2416 Adversarial AI plays 'ta' at (7, 7) across for 2
points!
2417 Adversarial AI chooses to play 'nogg' at (6, 9) (
down) for 13 points
2418 This move limits opponent's maximum potential
score to 18 points
```

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2419 Adversarial AI plays 'nogg' at (6, 9) down for 13
    points!
2420
2421 MCTS AI's decision process:
2422 Choosing to play 'tufa' at (3, 10) (down) for 16
    points
2423 Expected net score advantage: -9.6 points
2424 Based on 10 simulated opponent responses
2425 MCTS AI plays 'tufa' at (3, 10) down for 16
    points!
2426 Adversarial AI chooses to play 'rite' at (3, 8) (
    across) for 8 points
2427 This move limits opponent's maximum potential
    score to 23 points
2428 Adversarial AI plays 'rite' at (3, 8) across for
    8 points!
2429
2430 MCTS AI's decision process:
2431 Choosing to play 'jew' at (1, 7) (down) for 29
    points
2432 Expected net score advantage: -1.5 points
2433 Based on 10 simulated opponent responses
2434 MCTS AI plays 'jew' at (1, 7) down for 29 points!
2435 Adversarial AI chooses to play 'jew' at (1, 7) (
    across) for 21 points
2436 This move limits opponent's maximum potential
    score to 20 points
2437 Adversarial AI plays 'jew' at (1, 7) across for
    21 points!
2438
2439 MCTS AI's decision process:
2440 Choosing to play 'dodo' at (0, 8) (across) for 15
    points
2441 Expected net score advantage: -10.5 points
2442 Based on 10 simulated opponent responses
2443 MCTS AI plays 'dodo' at (0, 8) across for 15
    points!
2444 Adversarial AI chooses to play 'gest' at (1, 12
    ) (down) for 19 points
2445 This move limits opponent's maximum potential
    score to 18 points
```

2446 Adversarial AI plays 'gest' at (1, 12) down for 19 points!

2447

2448 MCTS AI's decision process:

2449 Choosing to play 'panga' at (8, 6) (across) for 17 points

2450 Expected net score advantage: -9.4 points

2451 Based on 10 simulated opponent responses

2452 MCTS AI plays 'panga' at (8, 6) across for 17 points!

2453 Adversarial AI chooses to play 'vie' at (2, 5) (across) for 7 points

2454 This move limits opponent's maximum potential score to 14 points

2455 Adversarial AI plays 'vie' at (2, 5) across for 7 points!

2456

2457 MCTS AI's decision process:

2458 Choosing to play 'feel' at (5, 10) (across) for 15 points

2459 Expected net score advantage: -9.2 points

2460 Based on 10 simulated opponent responses

2461 MCTS AI plays 'feel' at (5, 10) across for 15 points!

2462 Adversarial AI chooses to play 'luster' at (3, 14) (down) for 29 points

2463 This move limits opponent's maximum potential score to 30 points

2464 Adversarial AI plays 'luster' at (3, 14) down for 29 points!

2465

2466 MCTS AI's decision process:

2467 Choosing to play 'yid' at (9, 5) (across) for 23 points

2468 Expected net score advantage: -6.8 points

2469 Based on 10 simulated opponent responses

2470 MCTS AI plays 'yid' at (9, 5) across for 23 points!

2471 Adversarial AI chooses to play 'fen' at (10, 4) (across) for 22 points

2472 This move limits opponent's maximum potential

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2472 score to 19 points
2473 Adversarial AI plays 'fen' at (10, 4) across for
22 points!
2474
2475 MCTS AI's decision process:
2476 Choosing to play 'yom' at (0, 13) (down) for 26
points
2477 Expected net score advantage: -2.0 points
2478 Based on 10 simulated opponent responses
2479 MCTS AI plays 'yom' at (0, 13) down for 26 points
!
2480 Adversarial AI chooses to play 'snib' at (11, 6
) (across) for 13 points
2481 This move limits opponent's maximum potential
score to 21 points
2482 Adversarial AI plays 'snib' at (11, 6) across for
13 points!
2483
2484 MCTS AI's decision process:
2485 Choosing to play 'glitz' at (9, 9) (across) for
37 points
2486 Expected net score advantage: -2.0 points
2487 Based on 10 simulated opponent responses
2488 MCTS AI plays 'glitz' at (9, 9) across for 37
points!
2489 Adversarial AI chooses to play 'cave' at (0, 5) (
down) for 11 points
2490 This move limits opponent's maximum potential
score to 27 points
2491 Adversarial AI plays 'cave' at (0, 5) down for 11
points!
2492
2493 MCTS AI's decision process:
2494 Choosing to play 'atopic' at (0, 0) (across) for
39 points
2495 Expected net score advantage: 3.9 points
2496 Based on 10 simulated opponent responses
2497 MCTS AI plays 'atopic' at (0, 0) across for 39
points!
2498 Adversarial AI chooses to play 'ox' at (0, 14) (
down) for 53 points
```

2499 This move limits opponent's maximum potential score to 20 points

2500 Adversarial AI plays 'ox' at (0, 14) down for 53 points!

2501

2502 MCTS AI's decision process:

2503 Choosing to play 'hairdo' at (4, 1) (across) for 31 points

2504 Expected net score advantage: 0.1 points

2505 Based on 10 simulated opponent responses

2506 MCTS AI plays 'hairdo' at (4, 1) across for 31 points!

2507 Adversarial AI chooses to play 'man' at (5, 1) (across) for 28 points

2508 This move limits opponent's maximum potential score to 32 points

2509 Adversarial AI plays 'man' at (5, 1) across for 28 points!

2510

2511 MCTS AI's decision process:

2512 Choosing to play 'sicken' at (12, 8) (across) for 33 points

2513 Expected net score advantage: 6.9 points

2514 Based on 10 simulated opponent responses

2515 MCTS AI plays 'sicken' at (12, 8) across for 33 points!

2516 Adversarial AI chooses to play 'reb' at (13, 12) (across) for 16 points

2517 This move limits opponent's maximum potential score to 29 points

2518 Adversarial AI plays 'reb' at (13, 12) across for 16 points!

2519

2520 MCTS AI's decision process:

2521 Choosing to play 'hae' at (3, 3) (across) for 26 points

2522 Expected net score advantage: 18.0 points

2523 Based on 10 simulated opponent responses

2524 MCTS AI plays 'hae' at (3, 3) across for 26 points!

2525 Adversarial AI chooses to play 'truer' at (9, 12

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2525 ) (down) for 5 points
2526 This move limits opponent's maximum potential
      score to 14 points
2527 Adversarial AI plays 'truer' at (9, 12) down for
      5 points!
2528
2529 MCTS AI's decision process:
2530 Choosing to play 'lie' at (1, 0) (across) for 14
      points
2531 Expected net score advantage: 7.0 points
2532 Based on 10 simulated opponent responses
2533 MCTS AI plays 'lie' at (1, 0) across for 14
      points!
2534 Adversarial AI chooses to play 'rem' at (2, 11) (
      across) for 7 points
2535 This move limits opponent's maximum potential
      score to 12 points
2536 Adversarial AI plays 'rem' at (2, 11) across for
      7 points!
2537
2538 MCTS AI's decision process:
2539 Choosing to play 'bo' at (13, 14) (down) for 12
      points
2540 Expected net score advantage: 12.0 points
2541 Based on 10 simulated opponent responses
2542 MCTS AI plays 'bo' at (13, 14) down for 12 points
      !
2543 No moves available for Adversarial AI. Skipping
      turn.
2544
2545 MCTS AI's decision process:
2546 Choosing to play 'vis' at (10, 8) (down) for 6
      points
2547 Expected net score advantage: 6.0 points
2548 Based on 10 simulated opponent responses
2549 MCTS AI plays 'vis' at (10, 8) down for 6 points!
2550 No moves available for Adversarial AI. Skipping
      turn.
2551 No moves available for MCTS AI. Skipping turn.
2552
2553 Neither player has any available moves. Game
```

```
2553 ending.
2554
2555 --- GAME OVER ---
2556 Final Board:
2557 atopic_dodo_yo
2558 lie_a_jew_gox
2559 ____vie____rem_
2560 ___hae_writes_l
2561 _hairdo___u_t_u
2562 _man_____feels
2563 _____na___t
2564 _____tao___e
2565 _____panga__r
2566 _____yid_glitz_
2567 ___fen_v___r__
2568 _____snib__u__
2569 _____sicken_
2570 _____reb
2571 _____o
2572 Board saved to 'assets/game_output.png'
2573
2574 Final Scores:
2575 MCTS AI: 2188 points
2576 Adversarial AI: 1836 points
2577
2578 MCTS AI wins!
2579
2580 Game 3/5
2581 Adversarial AI starts the game!
2582 Adversarial AI plays 'ka' at (7, 7) across for 6
    points!
2583 Adversarial AI chooses to play 'neb' at (6, 9) (
    down) for 12 points
2584 This move limits opponent's maximum potential
    score to 14 points
2585 Adversarial AI plays 'neb' at (6, 9) down for 12
    points!
2586
2587 MCTS AI's decision process:
2588 Choosing to play 'click' at (3, 7) (down) for 16
    points
```

2589 Expected net score advantage: -11.8 points
2590 Based on 10 simulated opponent responses
2591 MCTS AI plays 'click' at (3, 7) down for 16 points!
2592 Adversarial AI chooses to play 'cunt' at (3, 7) (across) for 6 points
2593 This move limits opponent's maximum potential score to 13 points
2594 Adversarial AI plays 'cunt' at (3, 7) across for 6 points!

2595

2596 MCTS AI's decision process:
2597 Choosing to play 'tax' at (3, 10) (down) for 20 points
2598 Expected net score advantage: -6.6 points
2599 Based on 10 simulated opponent responses
2600 MCTS AI plays 'tax' at (3, 10) down for 20 points!
2601 Adversarial AI chooses to play 'nay' at (6, 9) (across) for 17 points
2602 This move limits opponent's maximum potential score to 17 points
2603 Adversarial AI plays 'nay' at (6, 9) across for 17 points!

2604

2605 MCTS AI's decision process:
2606 Choosing to play 'jun' at (1, 9) (down) for 26 points
2607 Expected net score advantage: -5.0 points
2608 Based on 10 simulated opponent responses
2609 MCTS AI plays 'jun' at (1, 9) down for 26 points!
2610 Adversarial AI chooses to play 'sib' at (8, 7) (across) for 23 points
2611 This move limits opponent's maximum potential score to 15 points
2612 Adversarial AI plays 'sib' at (8, 7) across for 23 points!

2613

2614 MCTS AI's decision process:
2615 Choosing to play 'od' at (7, 11) (across) for 10 points

2616 Expected net score advantage: -14.1 points
2617 Based on 10 simulated opponent responses
2618 MCTS AI plays 'od' at (7, 11) across for 10 points!
2619 Adversarial AI chooses to play 'leal' at (6, 13) (down) for 10 points
2620 This move limits opponent's maximum potential score to 20 points
2621 Adversarial AI plays 'leal' at (6, 13) down for 10 points!

2622

2623 MCTS AI's decision process:
2624 Choosing to play 'friar' at (4, 14) (down) for 43 points
2625 Expected net score advantage: 16.3 points
2626 Based on 10 simulated opponent responses
2627 MCTS AI plays 'friar' at (4, 14) down for 43 points!
2628 Adversarial AI chooses to play 'wo' at (0, 10) (down) for 14 points
2629 This move limits opponent's maximum potential score to 22 points
2630 Adversarial AI plays 'wo' at (0, 10) down for 14 points!

2631

2632 MCTS AI's decision process:
2633 Choosing to play 'whort' at (0, 10) (across) for 45 points
2634 Expected net score advantage: 18.2 points
2635 Based on 10 simulated opponent responses
2636 MCTS AI plays 'whort' at (0, 10) across for 45 points!
2637 Adversarial AI chooses to play 'aero' at (9, 12) (down) for 10 points
2638 This move limits opponent's maximum potential score to 26 points
2639 Adversarial AI plays 'aero' at (9, 12) down for 10 points!

2640

2641 MCTS AI's decision process:
2642 Choosing to play 'voider' at (11, 7) (across) for

2642 28 points
2643 Expected net score advantage: -5.4 points
2644 Based on 10 simulated opponent responses
2645 MCTS AI plays 'voider' at (11, 7) across for 28 points!
2646 Adversarial AI chooses to play 'tae' at (10, 8) (across) for 16 points
2647 This move limits opponent's maximum potential score to 21 points
2648 Adversarial AI plays 'tae' at (10, 8) across for 16 points!
2649
2650 MCTS AI's decision process:
2651 Choosing to play 'we' at (1, 12) (across) for 19 points
2652 Expected net score advantage: -9.1 points
2653 Based on 10 simulated opponent responses
2654 MCTS AI plays 'we' at (1, 12) across for 19 points!
2655 Adversarial AI chooses to play 'nth' at (2, 12) (across) for 27 points
2656 This move limits opponent's maximum potential score to 27 points
2657 Adversarial AI plays 'nth' at (2, 12) across for 27 points!
2658
2659 MCTS AI's decision process:
2660 Choosing to play 'mu' at (2, 8) (across) for 14 points
2661 Expected net score advantage: -11.0 points
2662 Based on 10 simulated opponent responses
2663 MCTS AI plays 'mu' at (2, 8) across for 14 points!
2664 Adversarial AI chooses to play 'or' at (12, 8) (across) for 10 points
2665 This move limits opponent's maximum potential score to 20 points
2666 Adversarial AI plays 'or' at (12, 8) across for 10 points!
2667
2668 MCTS AI's decision process:

2669 Choosing to play 'pein' at (5, 5) (across) for 12 points
2670 Expected net score advantage: -13.0 points
2671 Based on 10 simulated opponent responses
2672 MCTS AI plays 'pein' at (5, 5) across for 12 points!
2673 Adversarial AI chooses to play 'zit' at (13, 6) (across) for 16 points
2674 This move limits opponent's maximum potential score to 28 points
2675 Adversarial AI plays 'zit' at (13, 6) across for 16 points!
2676
2677 MCTS AI's decision process:
2678 Choosing to play 'gnu' at (4, 3) (across) for 12 points
2679 Expected net score advantage: -9.8 points
2680 Based on 10 simulated opponent responses
2681 MCTS AI plays 'gnu' at (4, 3) across for 12 points!
2682 Adversarial AI chooses to play 'tug' at (2, 3) (down) for 8 points
2683 This move limits opponent's maximum potential score to 14 points
2684 Adversarial AI plays 'tug' at (2, 3) down for 8 points!
2685
2686 MCTS AI's decision process:
2687 Choosing to play 'peals' at (9, 10) (across) for 22 points
2688 Expected net score advantage: -1.3 points
2689 Based on 10 simulated opponent responses
2690 MCTS AI plays 'peals' at (9, 10) across for 22 points!
2691 Adversarial AI chooses to play 'aye' at (0, 2) (down) for 16 points
2692 This move limits opponent's maximum potential score to 21 points
2693 Adversarial AI plays 'aye' at (0, 2) down for 16 points!
2694

2695 MCTS AI's decision process:
2696 Choosing to play 'slaved' at (0, 0) (across) for 42 points
2697 Expected net score advantage: 14.3 points
2698 Based on 10 simulated opponent responses
2699 MCTS AI plays 'slaved' at (0, 0) across for 42 points!
2700 Adversarial AI chooses to play 'lag' at (0, 1) (down) for 22 points
2701 This move limits opponent's maximum potential score to 18 points
2702 Adversarial AI plays 'lag' at (0, 1) down for 22 points!
2703
2704 MCTS AI's decision process:
2705 Choosing to play 'fer' at (1, 4) (across) for 18 points
2706 Expected net score advantage: -2.7 points
2707 Based on 10 simulated opponent responses
2708 MCTS AI plays 'fer' at (1, 4) across for 18 points!
2709 Adversarial AI chooses to play 'oe' at (12, 12) (across) for 2 points
2710 This move limits opponent's maximum potential score to 23 points
2711 Adversarial AI plays 'oe' at (12, 12) across for 2 points!
2712
2713 MCTS AI's decision process:
2714 Choosing to play 'semi' at (11, 13) (down) for 23 points
2715 Expected net score advantage: 14.0 points
2716 Based on 10 simulated opponent responses
2717 MCTS AI plays 'semi' at (11, 13) down for 23 points!
2718 Adversarial AI chooses to play 'goo' at (6, 3) (across) for 9 points
2719 This move limits opponent's maximum potential score to 18 points
2720 Adversarial AI plays 'goo' at (6, 3) across for 9 points!

2721
2722 MCTS AI's decision process:
2723 Choosing to play 'dib' at (14, 12) (across) for
18 points
2724 Expected net score advantage: 13.0 points
2725 Based on 10 simulated opponent responses
2726 MCTS AI plays 'dib' at (14, 12) across for 18
points!
2727 Adversarial AI chooses to play 'if' at (4, 13) (across)
for 5 points
2728 This move limits opponent's maximum potential
score to 7 points
2729 Adversarial AI plays 'if' at (4, 13) across for 5
points!
2730
2731 MCTS AI's decision process:
2732 Choosing to play 'upon' at (4, 5) (down) for 6
points
2733 Expected net score advantage: 4.0 points
2734 Based on 10 simulated opponent responses
2735 MCTS AI plays 'upon' at (4, 5) down for 6 points!
2736 Adversarial AI chooses to play 'ai' at (4, 10) (across)
for 2 points
2737 This move limits opponent's maximum potential
score to 0 points
2738 Adversarial AI plays 'ai' at (4, 10) across for 2
points!
2739 No moves available for MCTS AI. Skipping turn.
2740 No moves available for Adversarial AI. Skipping
turn.
2741
2742 Neither player has any available moves. Game
ending.
2743
2744 --- GAME OVER ---
2745 Final Board:
2746 slaved____whort
2747 _ay_fer__jo_we_
2748 _get____mu__nth
2749 ___u___cunt_____
2750 ___gnu_l__ai_if

```
2751 _____pein_x___r
2752 ___goo_c_nay_li
2753 _____n_kae_odea
2754 _____sib___ar
2755 _____peals
2756 _____tae_e__
2757 _____voiders_
2758 _____or__oe_
2759 _____zit____m_
2760 _____dib
2761 Board saved to 'assets/game_output.png'
2762
2763 Final Scores:
2764 Adversarial AI: 2067 points
2765 MCTS AI: 2562 points
2766
2767 MCTS AI wins!
2768
2769 Game 4/5
2770 MCTS AI starts the game!
2771 MCTS AI plays 'et' at (7, 7) across for 2 points!
2772
2773 MCTS AI's decision process:
2774 Choosing to play 'vaus' at (6, 6) (across) for 17
    points
2775 Expected net score advantage: -2.0 points
2776 Based on 10 simulated opponent responses
2777 MCTS AI plays 'vaus' at (6, 6) across for 17
    points!
2778 Adversarial AI chooses to play 'sati' at (6, 9) (
    down) for 9 points
2779 This move limits opponent's maximum potential
    score to 14 points
2780 Adversarial AI plays 'sati' at (6, 9) down for 9
    points!
2781
2782 MCTS AI's decision process:
2783 Choosing to play 'vine' at (10, 7) (across) for
    19 points
2784 Expected net score advantage: -9.5 points
2785 Based on 10 simulated opponent responses
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2786 MCTS AI plays 'vine' at (10, 7) across for 19
    points!
2787 Adversarial AI chooses to play 'na' at (11, 10) (
    across) for 6 points
2788 This move limits opponent's maximum potential
    score to 17 points
2789 Adversarial AI plays 'na' at (11, 10) across for
    6 points!
2790
2791 MCTS AI's decision process:
2792 Choosing to play 'jeon' at (8, 6) (down) for 27
    points
2793 Expected net score advantage: -0.7 points
2794 Based on 10 simulated opponent responses
2795 MCTS AI plays 'jeon' at (8, 6) down for 27 points
    !
2796 Adversarial AI chooses to play 'zoea' at (9, 12
    ) (down) for 29 points
2797 This move limits opponent's maximum potential
    score to 27 points
2798 Adversarial AI plays 'zoea' at (9, 12) down for
    29 points!
2799
2800 MCTS AI's decision process:
2801 Choosing to play 'flip' at (13, 11) (across) for
    32 points
2802 Expected net score advantage: -0.4 points
2803 Based on 10 simulated opponent responses
2804 MCTS AI plays 'flip' at (13, 11) across for 32
    points!
2805 Adversarial AI chooses to play 'gape' at (11, 14
    ) (down) for 27 points
2806 This move limits opponent's maximum potential
    score to 24 points
2807 Adversarial AI plays 'gape' at (11, 14) down for
    27 points!
2808
2809 MCTS AI's decision process:
2810 Choosing to play 'zoo' at (9, 12) (across) for 14
    points
2811 Expected net score advantage: -12.6 points
```

```
2812 Based on 10 simulated opponent responses
2813 MCTS AI plays 'zoo' at (9, 12) across for 14
      points!
2814 Adversarial AI chooses to play 'quin' at (11, 3
      ) (across) for 26 points
2815 This move limits opponent's maximum potential
      score to 24 points
2816 Adversarial AI plays 'quin' at (11, 3) across for
      26 points!
2817
2818 MCTS AI's decision process:
2819 Choosing to play 'redia' at (14, 7) (across) for
      27 points
2820 Expected net score advantage: -0.8 points
2821 Based on 10 simulated opponent responses
2822 MCTS AI plays 'redia' at (14, 7) across for 27
      points!
2823 Adversarial AI chooses to play 'guar' at (13, 5
      ) (across) for 13 points
2824 This move limits opponent's maximum potential
      score to 12 points
2825 Adversarial AI plays 'guar' at (13, 5) across for
      13 points!
2826
2827 MCTS AI's decision process:
2828 Choosing to play 'romeo' at (5, 14) (down) for 21
      points
2829 Expected net score advantage: -3.1 points
2830 Based on 10 simulated opponent responses
2831 MCTS AI plays 'romeo' at (5, 14) down for 21
      points!
2832 Adversarial AI chooses to play 'lowse' at (1, 13
      ) (down) for 24 points
2833 This move limits opponent's maximum potential
      score to 19 points
2834 Adversarial AI plays 'lowse' at (1, 13) down for
      24 points!
2835
2836 MCTS AI's decision process:
2837 Choosing to play 'feh' at (0, 12) (down) for 30
      points
```

```
2838 Expected net score advantage: -3.2 points
2839 Based on 10 simulated opponent responses
2840 MCTS AI plays 'feh' at (0, 12) down for 30 points
!
2841 Adversarial AI chooses to play 'ween' at (2, 11)
    ) (down) for 23 points
2842 This move limits opponent's maximum potential
    score to 16 points
2843 Adversarial AI plays 'ween' at (2, 11) down for
    23 points!
2844
2845 MCTS AI's decision process:
2846 Choosing to play 'asp' at (0, 14) (down) for 30
    points
2847 Expected net score advantage: 2.6 points
2848 Based on 10 simulated opponent responses
2849 MCTS AI plays 'asp' at (0, 14) down for 30 points
!
2850 Adversarial AI chooses to play 'techie' at (4, 6)
    ) (across) for 22 points
2851 This move limits opponent's maximum potential
    score to 21 points
2852 Adversarial AI plays 'techie' at (4, 6) across
    for 22 points!
2853
2854 MCTS AI's decision process:
2855 Choosing to play 'bribe' at (0, 7) (down) for 36
    points
2856 Expected net score advantage: 9.1 points
2857 Based on 10 simulated opponent responses
2858 MCTS AI plays 'bribe' at (0, 7) down for 36
    points!
2859 Adversarial AI chooses to play 'kirns' at (1, 5)
    ) (across) for 21 points
2860 This move limits opponent's maximum potential
    score to 26 points
2861 Adversarial AI plays 'kirns' at (1, 5) across for
    21 points!
2862
2863 MCTS AI's decision process:
2864 Choosing to play 'rye' at (9, 4) (across) for 14
```

2864 points
2865 Expected net score advantage: -7.7 points
2866 Based on 10 simulated opponent responses
2867 MCTS AI plays 'rye' at (9, 4) across for 14 points!
2868 Adversarial AI chooses to play 'rya' at (5, 4) (across) for 20 points
2869 This move limits opponent's maximum potential score to 12 points
2870 Adversarial AI plays 'rya' at (5, 4) across for 20 points!

2871

2872 MCTS AI's decision process:
2873 Choosing to play 'quid' at (11, 3) (down) for 16 points
2874 Expected net score advantage: -5.8 points
2875 Based on 10 simulated opponent responses
2876 MCTS AI plays 'quid' at (11, 3) down for 16 points!
2877 Adversarial AI chooses to play 'oxo' at (4, 2) (across) for 24 points
2878 This move limits opponent's maximum potential score to 12 points
2879 Adversarial AI plays 'oxo' at (4, 2) across for 24 points!

2880

2881 MCTS AI's decision process:
2882 Choosing to play 'dun' at (12, 2) (across) for 10 points
2883 Expected net score advantage: -2.0 points
2884 Based on 10 simulated opponent responses
2885 MCTS AI plays 'dun' at (12, 2) across for 10 points!
2886 Adversarial AI chooses to play 'tels' at (1, 11) (across) for 12 points
2887 This move limits opponent's maximum potential score to 9 points
2888 Adversarial AI plays 'tels' at (1, 11) across for 12 points!

2889

2890 MCTS AI's decision process:

```
2891 Choosing to play 'lit' at (9, 8) (across) for 8
      points
2892 Expected net score advantage: -6.0 points
2893 Based on 10 simulated opponent responses
2894 MCTS AI plays 'lit' at (9, 8) across for 8 points!
2895 Adversarial AI chooses to play 'tend' at (9, 10)
      ) (down) for 5 points
2896 This move limits opponent's maximum potential
      score to 6 points
2897 Adversarial AI plays 'tend' at (9, 10) down for 5
      points!
2898
2899 MCTS AI's decision process:
2900 Choosing to play 'ti' at (2, 6) (across) for 6
      points
2901 Expected net score advantage: -3.0 points
2902 Based on 10 simulated opponent responses
2903 MCTS AI plays 'ti' at (2, 6) across for 6 points!
2904 Adversarial AI chooses to play 'ama' at (12, 12)
      ) (across) for 9 points
2905 This move limits opponent's maximum potential
      score to 4 points
2906 Adversarial AI plays 'ama' at (12, 12) across for
      9 points!
2907
2908 MCTS AI's decision process:
2909 Choosing to play 'gor' at (3, 4) (down) for 4
      points
2910 Expected net score advantage: -1.0 points
2911 Based on 10 simulated opponent responses
2912 MCTS AI plays 'gor' at (3, 4) down for 4 points!
2913 Adversarial AI chooses to play 'car' at (12, 7) (
      down) for 5 points
2914 This move limits opponent's maximum potential
      score to 2 points
2915 Adversarial AI plays 'car' at (12, 7) down for 5
      points!
2916
2917 MCTS AI's decision process:
2918 Choosing to play 'lo' at (3, 2) (down) for 2
```

```
2918 points
2919 Expected net score advantage: 2.0 points
2920 Based on 10 simulated opponent responses
2921 MCTS AI plays 'lo' at (3, 2) down for 2 points!
2922 No moves available for Adversarial AI. Skipping
turn.
2923 No moves available for MCTS AI. Skipping turn.
2924
2925 Neither player has any available moves. Game
ending.
2926
2927 --- GAME OVER ---
2928 Final Board:
2929 _____b____f_a
2930 _____kirns_tels
2931 _____ti____whop
2932 _l_g__b____e_w_
2933 __oxo_techie_s_
2934 ___rya____n_er
2935 _____vaus____o
2936 _____eta____m
2937 _____j__t____e
2938 ___rye_lit_zoo
2939 _____ovine_o__
2940 __quin____nae_g
2941 _dun__c__d_ama
2942 __i_guar__flip
2943 __d__redia__e
2944 Board saved to 'assets/game_output.png'
2945
2946 Final Scores:
2947 MCTS AI: 2877 points
2948 Adversarial AI: 2342 points
2949
2950 MCTS AI wins!
2951
2952 Game 5/5
2953 MCTS AI starts the game!
2954 MCTS AI plays 'oe' at (7, 7) across for 2 points!
2955
2956 MCTS AI's decision process:
```

2957 Choosing to play 'uta' at (6, 6) (across) for 10 points
2958 Expected net score advantage: -9.3 points
2959 Based on 10 simulated opponent responses
2960 MCTS AI plays 'uta' at (6, 6) across for 10 points!
2961 Adversarial AI chooses to play 'toea' at (6, 7) (down) for 4 points
2962 This move limits opponent's maximum potential score to 21 points
2963 Adversarial AI plays 'toea' at (6, 7) down for 4 points!
2964
2965 MCTS AI's decision process:
2966 Choosing to play 'laic' at (9, 6) (across) for 12 points
2967 Expected net score advantage: -11.0 points
2968 Based on 10 simulated opponent responses
2969 MCTS AI plays 'laic' at (9, 6) across for 12 points!
2970 Adversarial AI chooses to play 'flee' at (8, 4) (across) for 11 points
2971 This move limits opponent's maximum potential score to 7 points
2972 Adversarial AI plays 'flee' at (8, 4) across for 11 points!
2973
2974 MCTS AI's decision process:
2975 Choosing to play 'enoki' at (7, 0) (across) for 47 points
2976 Expected net score advantage: 15.5 points
2977 Based on 10 simulated opponent responses
2978 MCTS AI plays 'enoki' at (7, 0) across for 47 points!
2979 Adversarial AI chooses to play 'yok' at (5, 3) (down) for 10 points
2980 This move limits opponent's maximum potential score to 29 points
2981 Adversarial AI plays 'yok' at (5, 3) down for 10 points!
2982

2983 MCTS AI's decision process:
2984 Choosing to play 'engirded' at (7, 0) (down) for
36 points
2985 Expected net score advantage: 4.1 points
2986 Based on 10 simulated opponent responses
2987 MCTS AI plays 'engirded' at (7, 0) down for 86
points!
2988 Adversarial AI chooses to play 'mor' at (6, 2) (across) for 21 points
2989 This move limits opponent's maximum potential score to 33 points
2990 Adversarial AI plays 'mor' at (6, 2) across for 21 points!
2991
2992 MCTS AI's decision process:
2993 Choosing to play 'new' at (8, 0) (across) for 24 points
2994 Expected net score advantage: -3.6 points
2995 Based on 10 simulated opponent responses
2996 MCTS AI plays 'new' at (8, 0) across for 24 points!
2997 Adversarial AI chooses to play 'conn' at (9, 9) (down) for 6 points
2998 This move limits opponent's maximum potential score to 22 points
2999 Adversarial AI plays 'conn' at (9, 9) down for 6 points!
3000
3001 MCTS AI's decision process:
3002 Choosing to play 'ree' at (10, 10) (down) for 14 points
3003 Expected net score advantage: -11.2 points
3004 Based on 10 simulated opponent responses
3005 MCTS AI plays 'ree' at (10, 10) down for 14 points!
3006 Adversarial AI chooses to play 'eel' at (11, 1) (down) for 15 points
3007 This move limits opponent's maximum potential score to 25 points
3008 Adversarial AI plays 'eel' at (11, 1) down for 15 points!

3009
3010 MCTS AI's decision process:
3011 Choosing to play 'anew' at (8, 11) (down) for 29 points
3012 Expected net score advantage: 0.1 points
3013 Based on 10 simulated opponent responses
3014 MCTS AI plays 'anew' at (8, 11) down for 29 points!
3015 Adversarial AI chooses to play 'sib' at (10, 2) (down) for 25 points
3016 This move limits opponent's maximum potential score to 40 points
3017 Adversarial AI plays 'sib' at (10, 2) down for 25 points!
3018
3019 MCTS AI's decision process:
3020 Choosing to play 'intro' at (10, 3) (down) for 29 points
3021 Expected net score advantage: -4.4 points
3022 Based on 10 simulated opponent responses
3023 MCTS AI plays 'intro' at (10, 3) down for 29 points!
3024 Adversarial AI chooses to play 'typp' at (11, 12) (down) for 29 points
3025 This move limits opponent's maximum potential score to 29 points
3026 Adversarial AI plays 'typp' at (11, 12) down for 29 points!
3027
3028 MCTS AI's decision process:
3029 Choosing to play 'grouped' at (14, 8) (across) for 36 points
3030 Expected net score advantage: 4.2 points
3031 Based on 10 simulated opponent responses
3032 MCTS AI plays 'grouped' at (14, 8) across for 36 points!
3033 Adversarial AI chooses to play 'goa' at (6, 12) (down) for 10 points
3034 This move limits opponent's maximum potential score to 27 points
3035 Adversarial AI plays 'goa' at (6, 12) down for 10

3035 points!

3036

3037 MCTS AI's decision process:

3038 Choosing to play 'rax' at (13, 3) (across) for 26 points

3039 Expected net score advantage: 1.4 points

3040 Based on 10 simulated opponent responses

3041 MCTS AI plays 'rax' at (13, 3) across for 26 points!

3042 Adversarial AI chooses to play 'sib' at (10, 2) (across) for 10 points

3043 This move limits opponent's maximum potential score to 32 points

3044 Adversarial AI plays 'sib' at (10, 2) across for 10 points!

3045

3046 MCTS AI's decision process:

3047 Choosing to play 'azo' at (12, 5) (across) for 31 points

3048 Expected net score advantage: 4.3 points

3049 Based on 10 simulated opponent responses

3050 MCTS AI plays 'azo' at (12, 5) across for 31 points!

3051 Adversarial AI chooses to play 'quid' at (11, 14) (down) for 24 points

3052 This move limits opponent's maximum potential score to 17 points

3053 Adversarial AI plays 'quid' at (11, 14) down for 24 points!

3054

3055 MCTS AI's decision process:

3056 Choosing to play 'shh' at (7, 13) (down) for 25 points

3057 Expected net score advantage: 8.6 points

3058 Based on 10 simulated opponent responses

3059 MCTS AI plays 'shh' at (7, 13) down for 25 points !

3060 Adversarial AI chooses to play 'vig' at (6, 10) (across) for 7 points

3061 This move limits opponent's maximum potential score to 15 points

3062 Adversarial AI plays 'vig' at (6, 10) across for 7 points!

3063

3064 MCTS AI's decision process:

3065 Choosing to play 'squid' at (10, 14) (down) for 15 points

3066 Expected net score advantage: -4.5 points

3067 Based on 10 simulated opponent responses

3068 MCTS AI plays 'squid' at (10, 14) down for 15 points!

3069 Adversarial AI chooses to play 'luv' at (4, 10) (down) for 12 points

3070 This move limits opponent's maximum potential score to 13 points

3071 Adversarial AI plays 'luv' at (4, 10) down for 12 points!

3072

3073 MCTS AI's decision process:

3074 Choosing to play 'tram' at (2, 9) (down) for 24 points

3075 Expected net score advantage: 5.0 points

3076 Based on 10 simulated opponent responses

3077 MCTS AI plays 'tram' at (2, 9) down for 24 points !

3078 Adversarial AI chooses to play 'davit' at (0, 11) (down) for 25 points

3079 This move limits opponent's maximum potential score to 18 points

3080 Adversarial AI plays 'davit' at (0, 11) down for 25 points!

3081

3082 MCTS AI's decision process:

3083 Choosing to play 'adits' at (0, 10) (across) for 18 points

3084 Expected net score advantage: 5.0 points

3085 Based on 10 simulated opponent responses

3086 MCTS AI plays 'adits' at (0, 10) across for 18 points!

3087 Adversarial AI chooses to play 'of' at (12, 7) (down) for 5 points

3088 This move limits opponent's maximum potential

```
3088 score to 9 points
3089 Adversarial AI plays 'of' at (12, 7) down for 5
      points!
3090
3091 MCTS AI's decision process:
3092 Choosing to play 'jo' at (14, 2) (across) for 9
      points
3093 Expected net score advantage: 9.0 points
3094 Based on 10 simulated opponent responses
3095 MCTS AI plays 'jo' at (14, 2) across for 9 points
      !
3096 No moves available for Adversarial AI. Skipping
      turn.
3097 No moves available for MCTS AI. Skipping turn.
3098
3099 Neither player has any available moves. Game
      ending.
3100
3101 --- GAME OVER ---
3102 Final Board:
3103 _____adits
3104 _____a___
3105 _____t_v___
3106 _____r_i___
3107 _____alt___
3108 ___y____mu_____
3109 __mor_utu_vig__
3110 enoki__oe___os_
3111 new_flee___aah_
3112 g_____laic_n_h_
3113 i_sib____ore__s
3114 rein_____newt_q
3115 debt_azoz_ne_y_u
3116 el_rax_f____p_i
3117 d_jo____grouped
3118 Board saved to 'assets/game_output.png'
3119
3120 Final Scores:
3121 MCTS AI: 3314 points
3122 Adversarial AI: 2556 points
3123
```

```
3124 MCTS AI wins!
3125
3126 Playing matches between Adversarial AI and
    Conservative AI
3127
3128 Game 1/5
3129 Conservative AI starts the game!
3130 Conservative AI plays 'ag' at (7, 7) across for 3
    points!
3131
3132 Conservative AI's decision process:
3133 Choosing to play 'lo' at (8, 7) (across) for 9
    points
3134 Move evaluation score: 27.0
3135 Rack balance after move: 0.59
3136 Conservative AI plays 'lo' at (8, 7) across for 9
    points!
3137 Adversarial AI chooses to play 'bot' at (9, 7) (
    across) for 16 points
3138 This move limits opponent's maximum potential
    score to 12 points
3139 Adversarial AI plays 'bot' at (9, 7) across for
    16 points!
3140
3141 Conservative AI's decision process:
3142 Choosing to play 'aw' at (10, 9) (across) for 12
    points
3143 Move evaluation score: 28.2
3144 Rack balance after move: 0.59
3145 Conservative AI plays 'aw' at (10, 9) across for
    12 points!
3146 Adversarial AI chooses to play 'liri' at (10, 11
    ) (down) for 14 points
3147 This move limits opponent's maximum potential
    score to 25 points
3148 Adversarial AI plays 'liri' at (10, 11) down for
    14 points!
3149
3150 Conservative AI's decision process:
3151 Choosing to play 'louie' at (8, 7) (across) for 8
    points
```

```
3152 Move evaluation score: 33.2
3153 Rack balance after move: 0.59
3154 Conservative AI plays 'louie' at (8, 7) across
    for 8 points!
3155 Adversarial AI chooses to play 'xi' at (13, 10) (
    down) for 18 points
3156 This move limits opponent's maximum potential
    score to 20 points
3157 Adversarial AI plays 'xi' at (13, 10) down for 18
    points!
3158
3159 Conservative AI's decision process:
3160 Choosing to play 'rato' at (12, 11) (across) for
    8 points
3161 Move evaluation score: 32.5
3162 Rack balance after move: 0.63
3163 Conservative AI plays 'rato' at (12, 11) across
    for 8 points!
3164 Adversarial AI chooses to play 'tenuti' at (8, 13
    ) (down) for 16 points
3165 This move limits opponent's maximum potential
    score to 22 points
3166 Adversarial AI plays 'tenuti' at (8, 13) down for
    16 points!
3167
3168 Conservative AI's decision process:
3169 Choosing to play 'uh' at (11, 13) (across) for 18
    points
3170 Move evaluation score: 44.0
3171 Rack balance after move: 0.79
3172 Conservative AI plays 'uh' at (11, 13) across for
    18 points!
3173 Adversarial AI chooses to play 'pee' at (9, 12) (
    across) for 5 points
3174 This move limits opponent's maximum potential
    score to 23 points
3175 Adversarial AI plays 'pee' at (9, 12) across for
    5 points!
3176
3177 Conservative AI's decision process:
3178 Choosing to play 'roe' at (7, 14) (down) for 11
```

```
3178 points
3179 Move evaluation score: 23.7
3180 Rack balance after move: 0.77
3181 Conservative AI plays 'roe' at (7, 14) down for
    11 points!
3182 Adversarial AI chooses to play 'si' at (7, 10) (
    down) for 2 points
3183 This move limits opponent's maximum potential
    score to 20 points
3184 Adversarial AI plays 'si' at (7, 10) down for 2
    points!
3185
3186 Conservative AI's decision process:
3187 Choosing to play 'sac' at (7, 10) (across) for 9
    points
3188 Move evaluation score: 27.6
3189 Rack balance after move: 0.63
3190 Conservative AI plays 'sac' at (7, 10) across for
    9 points!
3191 Adversarial AI chooses to play 'honk' at (11, 14
    ) (down) for 35 points
3192 This move limits opponent's maximum potential
    score to 20 points
3193 Adversarial AI plays 'honk' at (11, 14) down for
    35 points!
3194
3195 Conservative AI's decision process:
3196 Choosing to play 'oasis' at (10, 3) (across) for
    16 points
3197 Move evaluation score: 14.7
3198 Rack balance after move: 0.39
3199 Conservative AI plays 'oasis' at (10, 3) across
    for 16 points!
3200 Adversarial AI chooses to play 'loud' at (9, 3) (
    down) for 10 points
3201 This move limits opponent's maximum potential
    score to 18 points
3202 Adversarial AI plays 'loud' at (9, 3) down for 10
    points!
3203
3204 Conservative AI's decision process:
```

```
3205 Choosing to play 'oe' at (12, 2) (down) for 10
      points
3206 Move evaluation score: 19.5
3207 Rack balance after move: 0.00
3208 Conservative AI plays 'oe' at (12, 2) down for 10
      points!
3209 Adversarial AI chooses to play 'zee' at (13, 0) (
      across) for 24 points
3210 This move limits opponent's maximum potential
      score to 24 points
3211 Adversarial AI plays 'zee' at (13, 0) across for
      24 points!
3212
3213 Conservative AI's decision process:
3214 Choosing to play 'ionize' at (9, 0) (down) for 48
      points
3215 Move evaluation score: 28.8
3216 Rack balance after move: 0.49
3217 Conservative AI plays 'ionize' at (9, 0) down for
      48 points!
3218 Adversarial AI chooses to play 'wady' at (7, 1) (
      down) for 27 points
3219 This move limits opponent's maximum potential
      score to 30 points
3220 Adversarial AI plays 'wady' at (7, 1) down for 27
      points!
3221
3222 Conservative AI's decision process:
3223 Choosing to play 'uh' at (11, 3) (across) for 10
      points
3224 Move evaluation score: 31.0
3225 Rack balance after move: 0.79
3226 Conservative AI plays 'uh' at (11, 3) across for
      10 points!
3227 Adversarial AI chooses to play 'my' at (8, 2) (
      down) for 25 points
3228 This move limits opponent's maximum potential
      score to 21 points
3229 Adversarial AI plays 'my' at (8, 2) down for 25
      points!
3230
```

```
3231 Conservative AI's decision process:  
3232 Choosing to play 'lam' at (8, 0) (across) for 21  
    points  
3233 Move evaluation score: 29.2  
3234 Rack balance after move: 0.79  
3235 Conservative AI plays 'lam' at (8, 0) across for  
    21 points!  
3236 Adversarial AI chooses to play 'fungi' at (14, 6  
    ) (across) for 27 points  
3237 This move limits opponent's maximum potential  
    score to 16 points  
3238 Adversarial AI plays 'fungi' at (14, 6) across  
    for 27 points!  
3239  
3240 Conservative AI's decision process:  
3241 Choosing to play 're' at (13, 5) (across) for 9  
    points  
3242 Move evaluation score: 16.3  
3243 Rack balance after move: 0.79  
3244 Conservative AI plays 're' at (13, 5) across for  
    9 points!  
3245 Adversarial AI chooses to play 'abbot' at (9, 5  
    ) (across) for 19 points  
3246 This move limits opponent's maximum potential  
    score to 18 points  
3247 Adversarial AI plays 'abbot' at (9, 5) across for  
    19 points!  
3248  
3249 Conservative AI's decision process:  
3250 Choosing to play 'er' at (12, 5) (across) for 12  
    points  
3251 Move evaluation score: 18.0  
3252 Rack balance after move: 0.74  
3253 Conservative AI plays 'er' at (12, 5) across for  
    12 points!  
3254 Adversarial AI chooses to play 'vet' at (5, 6) (down)  
    for 11 points  
3255 This move limits opponent's maximum potential  
    score to 16 points  
3256 Adversarial AI plays 'vet' at (5, 6) down for 11  
    points!
```

3257
3258 Conservative AI's decision process:
3259 Choosing to play 'erect' at (12, 5) (across) for
10 points
3260 Move evaluation score: 15.4
3261 Rack balance after move: 0.74
3262 Conservative AI plays 'erect' at (12, 5) across
for 10 points!
3263 Adversarial AI chooses to play 'en' at (14, 0) (across)
for 4 points
3264 This move limits opponent's maximum potential
score to 6 points
3265 Adversarial AI plays 'en' at (14, 0) across for 4
points!
3266
3267 Conservative AI's decision process:
3268 Choosing to play 'vert' at (5, 6) (across) for 9
points
3269 Move evaluation score: 15.0
3270 Rack balance after move: 0.74
3271 Conservative AI plays 'vert' at (5, 6) across for
9 points!
3272 Adversarial AI chooses to play 'map' at (4, 5) (down)
for 23 points
3273 This move limits opponent's maximum potential
score to 7 points
3274 Adversarial AI plays 'map' at (4, 5) down for 23
points!
3275
3276 Conservative AI's decision process:
3277 Choosing to play 'jo' at (3, 4) (down) for 26
points
3278 Move evaluation score: 20.8
3279 Rack balance after move: 0.74
3280 Conservative AI plays 'jo' at (3, 4) down for 26
points!
3281 Adversarial AI chooses to play 'aid' at (6, 4) (down)
for 9 points
3282 This move limits opponent's maximum potential
score to 9 points
3283 Adversarial AI plays 'aid' at (6, 4) down for 9

```
3283 points!
3284
3285 Conservative AI's decision process:
3286 Choosing to play 'averts' at (5, 5) (across) for
9 points
3287 Move evaluation score: 10.1
3288 Rack balance after move: 0.60
3289 Conservative AI plays 'averts' at (5, 5) across
for 9 points!
3290 Adversarial AI chooses to play 'venom' at (4, 1
) (across) for 10 points
3291 This move limits opponent's maximum potential
score to 7 points
3292 Adversarial AI plays 'venom' at (4, 1) across for
10 points!
3293 Conservative AI plays 'gape' at (6, 3) across for
7 points!
3294 Adversarial AI chooses to play 're' at (3, 2) (
down) for 2 points
3295 This move limits opponent's maximum potential
score to 7 points
3296 Adversarial AI plays 're' at (3, 2) down for 2
points!
3297 Conservative AI plays 'froe' at (6, 14) down for
7 points!
3298 No moves available for Adversarial AI. Skipping
turn.
3299 Conservative AI plays 'red' at (3, 2) down for 4
points!
3300 No moves available for Adversarial AI. Skipping
turn.
3301 No moves available for Conservative AI. Skipping
turn.
3302
3303 Neither player has any available moves. Game
ending.
3304
3305 --- GAME OVER ---
3306 Final Board:
3307 -----
3308 -----
```

```
3309 -----
3310 __r_j-----
3311 _venom-----
3312 __d__averts_____
3313 ___gape_____f
3314 _w__i_tag_sac_r
3315 lam_d__louie_to
3316 idyl_abbot__pee
3317 oy_oasis_awl_n_
3318 n__uh_____i_uh
3319 i_od_erec_tato
3320 zee__re___xi_in
3321 en____fungi____k
3322 Board saved to 'assets/game_output.png'
3323
3324 Final Scores:
3325 Adversarial AI: 2853 points
3326 Conservative AI: 1629 points
3327
3328 Adversarial AI wins!
3329
3330 Game 2/5
3331 Adversarial AI starts the game!
3332 Adversarial AI plays 'si' at (7, 7) across for 2
points!
3333 Adversarial AI chooses to play 'oat' at (6, 6) (
across) for 10 points
3334 This move limits opponent's maximum potential
score to 19 points
3335 Adversarial AI plays 'oat' at (6, 6) across for
10 points!
3336
3337 Conservative AI's decision process:
3338 Choosing to play 'psi' at (7, 6) (across) for 9
points
3339 Move evaluation score: 31.6
3340 Rack balance after move: 0.89
3341 Conservative AI plays 'psi' at (7, 6) across for
9 points!
3342 Adversarial AI chooses to play 'fop' at (5, 6) (
down) for 8 points
```

```
3343 This move limits opponent's maximum potential
      score to 23 points
3344 Adversarial AI plays 'fop' at (5, 6) down for 8
      points!
3345
3346 Conservative AI's decision process:
3347 Choosing to play 'fa' at (5, 6) (across) for 8
      points
3348 Move evaluation score: 31.2
3349 Rack balance after move: 0.97
3350 Conservative AI plays 'fa' at (5, 6) across for 8
      points!
3351 Adversarial AI chooses to play 'tie' at (6, 8) (
      down) for 4 points
3352 This move limits opponent's maximum potential
      score to 8 points
3353 Adversarial AI plays 'tie' at (6, 8) down for 4
      points!
3354
3355 Conservative AI's decision process:
3356 Choosing to play 'beth' at (4, 7) (across) for 24
      points
3357 Move evaluation score: 29.2
3358 Rack balance after move: 0.89
3359 Conservative AI plays 'beth' at (4, 7) across for
      24 points!
3360 Adversarial AI chooses to play 'herl' at (9, 6) (
      across) for 13 points
3361 This move limits opponent's maximum potential
      score to 15 points
3362 Adversarial AI plays 'herl' at (9, 6) across for
      13 points!
3363
3364 Conservative AI's decision process:
3365 Choosing to play 'rentier' at (3, 8) (down) for
      13 points
3366 Move evaluation score: 31.6
3367 Rack balance after move: 0.79
3368 Conservative AI plays 'rentier' at (3, 8) down
      for 13 points!
3369 Adversarial AI chooses to play 'arose' at (1, 11
```

3369) (down) for 20 points
3370 This move limits opponent's maximum potential score to 25 points
3371 Adversarial AI plays 'arose' at (1, 11) down for 20 points!
3372
3373 Conservative AI's decision process:
3374 Choosing to play 'rev' at (2, 11) (across) for 12 points
3375 Move evaluation score: 34.5
3376 Rack balance after move: 0.89
3377 Conservative AI plays 'rev' at (2, 11) across for 12 points!
3378 Adversarial AI chooses to play 'avo' at (1, 13) (down) for 12 points
3379 This move limits opponent's maximum potential score to 13 points
3380 Adversarial AI plays 'avo' at (1, 13) down for 12 points!
3381
3382 Conservative AI's decision process:
3383 Choosing to play 'odor' at (3, 11) (across) for 9 points
3384 Move evaluation score: 37.5
3385 Rack balance after move: 0.89
3386 Conservative AI plays 'odor' at (3, 11) across for 9 points!
3387 Adversarial AI chooses to play 'rondo' at (3, 14) (down) for 18 points
3388 This move limits opponent's maximum potential score to 20 points
3389 Adversarial AI plays 'rondo' at (3, 14) down for 18 points!
3390
3391 Conservative AI's decision process:
3392 Choosing to play 'my' at (0, 14) (down) for 26 points
3393 Move evaluation score: 33.8
3394 Rack balance after move: 0.89
3395 Conservative AI plays 'my' at (0, 14) down for 26 points!

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3396 Adversarial AI chooses to play 'gone' at (10, 3)
    ) (across) for 15 points
3397 This move limits opponent's maximum potential
    score to 23 points
3398 Adversarial AI plays 'gone' at (10, 3) across for
    15 points!
3399
3400 Conservative AI's decision process:
3401 Choosing to play 'away' at (1, 11) (across) for
    17 points
3402 Move evaluation score: 32.6
3403 Rack balance after move: 0.97
3404 Conservative AI plays 'away' at (1, 11) across
    for 17 points!
3405 Adversarial AI chooses to play 'zings' at (7, 3)
    ) (down) for 50 points
3406 This move limits opponent's maximum potential
    score to 16 points
3407 Adversarial AI plays 'zings' at (7, 3) down for
    50 points!
3408
3409 Conservative AI's decision process:
3410 Choosing to play 'goner' at (10, 3) (across) for
    8 points
3411 Move evaluation score: 36.3
3412 Rack balance after move: 0.97
3413 Conservative AI plays 'goner' at (10, 3) across
    for 8 points!
3414 Adversarial AI chooses to play 'mig' at (8, 2) (
    across) for 9 points
3415 This move limits opponent's maximum potential
    score to 18 points
3416 Adversarial AI plays 'mig' at (8, 2) across for 9
    points!
3417
3418 Conservative AI's decision process:
3419 Choosing to play 'owed' at (0, 12) (down) for 8
    points
3420 Move evaluation score: 34.8
3421 Rack balance after move: 0.73
3422 Conservative AI plays 'owed' at (0, 12) down for
```

3422 8 points!

3423 Adversarial AI chooses to play 'lin' at (9, 1) (across) for 9 points

3424 This move limits opponent's maximum potential score to 12 points

3425 Adversarial AI plays 'lin' at (9, 1) across for 9 points!

3426

3427 Conservative AI's decision process:

3428 Choosing to play 'hebe' at (9, 6) (down) for 10 points

3429 Move evaluation score: 26.2

3430 Rack balance after move: 0.87

3431 Conservative AI plays 'hebe' at (9, 6) down for 10 points!

3432 Adversarial AI chooses to play 'jeers' at (13, 2) (across) for 24 points

3433 This move limits opponent's maximum potential score to 16 points

3434 Adversarial AI plays 'jeers' at (13, 2) across for 24 points!

3435

3436 Conservative AI's decision process:

3437 Choosing to play 'evil' at (12, 6) (across) for 8 points

3438 Move evaluation score: 27.3

3439 Rack balance after move: 0.87

3440 Conservative AI plays 'evil' at (12, 6) across for 8 points!

3441 Adversarial AI chooses to play 'ped' at (12, 4) (down) for 6 points

3442 This move limits opponent's maximum potential score to 23 points

3443 Adversarial AI plays 'ped' at (12, 4) down for 6 points!

3444

3445 Conservative AI's decision process:

3446 Choosing to play 'cud' at (6, 12) (across) for 9 points

3447 Move evaluation score: 18.2

3448 Rack balance after move: 0.77

```
3449 Conservative AI plays 'cud' at (6, 12) across for
    9 points!
3450 Adversarial AI chooses to play 'titan' at (13, 8
    ) (across) for 13 points
3451 This move limits opponent's maximum potential
    score to 20 points
3452 Adversarial AI plays 'titan' at (13, 8) across
    for 13 points!
3453
3454 Conservative AI's decision process:
3455 Choosing to play 'xu' at (14, 11) (across) for 36
    points
3456 Move evaluation score: 44.3
3457 Rack balance after move: 0.63
3458 Conservative AI plays 'xu' at (14, 11) across for
    36 points!
3459 Adversarial AI chooses to play 'flax' at (11, 11
    ) (down) for 28 points
3460 This move limits opponent's maximum potential
    score to 18 points
3461 Adversarial AI plays 'flax' at (11, 11) down for
    28 points!
3462
3463 Conservative AI's decision process:
3464 Choosing to play 'fano' at (5, 6) (across) for 13
    points
3465 Move evaluation score: 29.0
3466 Rack balance after move: 0.59
3467 Conservative AI plays 'fano' at (5, 6) across for
    13 points!
3468 Adversarial AI chooses to play 'ae' at (10, 10) (
    down) for 9 points
3469 This move limits opponent's maximum potential
    score to 18 points
3470 Adversarial AI plays 'ae' at (10, 10) down for 9
    points!
3471
3472 Conservative AI's decision process:
3473 Choosing to play 'titania' at (13, 8) (across)
    for 14 points
3474 Move evaluation score: 27.8
```

3475 Rack balance after move: 0.59
3476 Conservative AI plays 'titania' at (13, 8) across for 14 points!
3477 Adversarial AI chooses to play 'ikat' at (11, 14) (down) for 27 points
3478 This move limits opponent's maximum potential score to 21 points
3479 Adversarial AI plays 'ikat' at (11, 14) down for 27 points!

3480

3481 Conservative AI's decision process:
3482 Choosing to play 'migg' at (8, 2) (across) for 8 points
3483 Move evaluation score: 27.0
3484 Rack balance after move: 0.73
3485 Conservative AI plays 'migg' at (8, 2) across for 8 points!
3486 Adversarial AI chooses to play 'cat' at (9, 13) (down) for 13 points
3487 This move limits opponent's maximum potential score to 15 points
3488 Adversarial AI plays 'cat' at (9, 13) down for 13 points!

3489

3490 Conservative AI's decision process:
3491 Choosing to play 'cay' at (6, 12) (down) for 12 points
3492 Move evaluation score: 19.7
3493 Rack balance after move: 0.59
3494 Conservative AI plays 'cay' at (6, 12) down for 12 points!
3495 Adversarial AI chooses to play 'oaten' at (6, 6) (across) for 8 points
3496 This move limits opponent's maximum potential score to 5 points
3497 Adversarial AI plays 'oaten' at (6, 6) across for 8 points!
3498 Conservative AI plays 'de' at (14, 4) across for 5 points!
3499 Adversarial AI chooses to play 'wo' at (4, 13) (across) for 15 points

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3500 This move limits opponent's maximum potential
      score to 2 points
3501 Adversarial AI plays 'wo' at (4, 13) across for
      15 points!
3502 Conservative AI plays 'is' at (11, 2) across for
      2 points!
3503 Adversarial AI chooses to play 'dit' at (11, 8) (
      down) for 4 points
3504 This move limits opponent's maximum potential
      score to 2 points
3505 Adversarial AI plays 'dit' at (11, 8) down for 4
      points!
3506 Conservative AI plays 'nu' at (6, 10) down for 2
      points!
3507 No moves available for Adversarial AI. Skipping
      turn.
3508 Conservative AI plays 'li' at (9, 1) down for 2
      points!
3509 No moves available for Adversarial AI. Skipping
      turn.
3510 No moves available for Conservative AI. Skipping
      turn.
3511
3512 Neither player has any available moves. Game
      ending.
3513
3514 --- GAME OVER ---
3515 Final Board:
3516 _____o_m
3517 _____away
3518 _____rev_
3519 _____r__odor
3520 _____beths_wo
3521 _____fano_e__n
3522 _____oaten_cud
3523 ___z__psi_u_a_o
3524 __migg__e___y__
3525 _lin__herl__c_
3526 _i_goner__a__a_
3527 __is__b_d_ef_ti
3528 ___p_evil_l_k
```

```
3529 __jeers_titania
3530 ____de_____xu_t
3531 Board saved to 'assets/game_output.png'
3532
3533 Final Scores:
3534 Adversarial AI: 3170 points
3535 Conservative AI: 1884 points
3536
3537 Adversarial AI wins!
3538
3539 Game 3/5
3540 Adversarial AI starts the game!
3541 Adversarial AI plays 'al' at (7, 7) across for 2
    points!
3542 Adversarial AI chooses to play 'hew' at (6, 7) (
    across) for 18 points
3543 This move limits opponent's maximum potential
    score to 16 points
3544 Adversarial AI plays 'hew' at (6, 7) across for
    18 points!
3545
3546 Conservative AI's decision process:
3547 Choosing to play 'ale' at (7, 7) (across) for 8
    points
3548 Move evaluation score: 31.4
3549 Rack balance after move: 0.63
3550 Conservative AI plays 'ale' at (7, 7) across for
    8 points!
3551 Adversarial AI chooses to play 'ate' at (5, 7) (
    across) for 22 points
3552 This move limits opponent's maximum potential
    score to 28 points
3553 Adversarial AI plays 'ate' at (5, 7) across for
    22 points!
3554
3555 Conservative AI's decision process:
3556 Choosing to play 'hewn' at (6, 7) (across) for 10
    points
3557 Move evaluation score: 37.8
3558 Rack balance after move: 0.63
3559 Conservative AI plays 'hewn' at (6, 7) across for
```

3559 10 points!

3560 Adversarial AI chooses to play 'as' at (8, 8) (across) for 15 points

3561 This move limits opponent's maximum potential score to 13 points

3562 Adversarial AI plays 'as' at (8, 8) across for 15 points!

3563

3564 Conservative AI's decision process:

3565 Choosing to play 'pe' at (7, 6) (down) for 11 points

3566 Move evaluation score: 22.2

3567 Rack balance after move: 0.49

3568 Conservative AI plays 'pe' at (7, 6) down for 11 points!

3569 Adversarial AI chooses to play 'sue' at (8, 4) (across) for 3 points

3570 This move limits opponent's maximum potential score to 17 points

3571 Adversarial AI plays 'sue' at (8, 4) across for 3 points!

3572

3573 Conservative AI's decision process:

3574 Choosing to play 'palea' at (7, 6) (across) for 9 points

3575 Move evaluation score: 31.0

3576 Rack balance after move: 0.59

3577 Conservative AI plays 'palea' at (7, 6) across for 9 points!

3578 Adversarial AI chooses to play 'iff' at (3, 6) (down) for 16 points

3579 This move limits opponent's maximum potential score to 27 points

3580 Adversarial AI plays 'iff' at (3, 6) down for 16 points!

3581

3582 Conservative AI's decision process:

3583 Choosing to play 'riff' at (2, 6) (down) for 11 points

3584 Move evaluation score: 31.8

3585 Rack balance after move: 0.73

```
3586 Conservative AI plays 'riff' at (2, 6) down for
11 points!
3587 Adversarial AI chooses to play 'ash' at (8, 8) (
across) for 12 points
3588 This move limits opponent's maximum potential
score to 18 points
3589 Adversarial AI plays 'ash' at (8, 8) across for
12 points!
3590
3591 Conservative AI's decision process:
3592 Choosing to play 'paleae' at (7, 6) (across) for
9 points
3593 Move evaluation score: 29.8
3594 Rack balance after move: 0.49
3595 Conservative AI plays 'paleae' at (7, 6) across
for 9 points!
3596 Adversarial AI chooses to play 'deaf' at (4, 3) (
across) for 16 points
3597 This move limits opponent's maximum potential
score to 20 points
3598 Adversarial AI plays 'deaf' at (4, 3) across for
16 points!
3599
3600 Conservative AI's decision process:
3601 Choosing to play 'it' at (9, 4) (across) for 10
points
3602 Move evaluation score: 28.6
3603 Rack balance after move: 0.63
3604 Conservative AI plays 'it' at (9, 4) across for
10 points!
3605 Adversarial AI chooses to play 'troy' at (2, 5) (
across) for 11 points
3606 This move limits opponent's maximum potential
score to 25 points
3607 Adversarial AI plays 'troy' at (2, 5) across for
11 points!
3608
3609 Conservative AI's decision process:
3610 Choosing to play 'id' at (3, 6) (across) for 10
points
3611 Move evaluation score: 37.8
```

```
3612 Rack balance after move: 0.63
3613 Conservative AI plays 'id' at (3, 6) across for
    10 points!
3614 Adversarial AI chooses to play 'poind' at (0, 3
    ) (down) for 22 points
3615 This move limits opponent's maximum potential
    score to 21 points
3616 Adversarial AI plays 'poind' at (0, 3) down for
    22 points!
3617
3618 Conservative AI's decision process:
3619 Choosing to play 'prior' at (0, 3) (across) for
    21 points
3620 Move evaluation score: 32.8
3621 Rack balance after move: 0.53
3622 Conservative AI plays 'prior' at (0, 3) across
    for 21 points!
3623 Adversarial AI chooses to play 'man' at (10, 4) (
    across) for 23 points
3624 This move limits opponent's maximum potential
    score to 20 points
3625 Adversarial AI plays 'man' at (10, 4) across for
    23 points!
3626
3627 Conservative AI's decision process:
3628 Choosing to play 'aw' at (1, 8) (across) for 18
    points
3629 Move evaluation score: 30.6
3630 Rack balance after move: 0.63
3631 Conservative AI plays 'aw' at (1, 8) across for
    18 points!
3632 Adversarial AI chooses to play 'oaves' at (10, 7
    ) (down) for 33 points
3633 This move limits opponent's maximum potential
    score to 17 points
3634 Adversarial AI plays 'oaves' at (10, 7) down for
    33 points!
3635
3636 Conservative AI's decision process:
3637 Choosing to play 'vig' at (12, 7) (across) for 8
    points
```

```
3638 Move evaluation score: 34.8
3639 Rack balance after move: 0.63
3640 Conservative AI plays 'vig' at (12, 7) across for
    8 points!
3641 Adversarial AI chooses to play 'oke' at (0, 9) (
    across) for 13 points
3642 This move limits opponent's maximum potential
    score to 12 points
3643 Adversarial AI plays 'oke' at (0, 9) across for
    13 points!
3644
3645 Conservative AI's decision process:
3646 Choosing to play 'sonic' at (14, 7) (across) for
    10 points
3647 Move evaluation score: 28.8
3648 Rack balance after move: 0.63
3649 Conservative AI plays 'sonic' at (14, 7) across
    for 10 points!
3650 Adversarial AI chooses to play 'et' at (13, 9) (
    across) for 12 points
3651 This move limits opponent's maximum potential
    score to 10 points
3652 Adversarial AI plays 'et' at (13, 9) across for
    12 points!
3653
3654 Conservative AI's decision process:
3655 Choosing to play 'idea' at (3, 6) (across) for 11
    points
3656 Move evaluation score: 31.8
3657 Rack balance after move: 0.83
3658 Conservative AI plays 'idea' at (3, 6) across for
    11 points!
3659 Adversarial AI chooses to play 'jo' at (1, 2) (
    across) for 9 points
3660 This move limits opponent's maximum potential
    score to 36 points
3661 Adversarial AI plays 'jo' at (1, 2) across for 9
    points!
3662
3663 Conservative AI's decision process:
3664 Choosing to play 'xis' at (1, 11) (across) for 29
```

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3664 points
3665 Move evaluation score: 29.6
3666 Rack balance after move: 0.73
3667 Conservative AI plays 'xis' at (1, 11) across for
    29 points!
3668 Adversarial AI chooses to play 'extend' at (0, 11
    ) (down) for 28 points
3669 This move limits opponent's maximum potential
    score to 17 points
3670 Adversarial AI plays 'extend' at (0, 11) down for
    28 points!
3671
3672 Conservative AI's decision process:
3673 Choosing to play 'am' at (11, 7) (across) for 8
    points
3674 Move evaluation score: 36.3
3675 Rack balance after move: 0.97
3676 Conservative AI plays 'am' at (11, 7) across for
    8 points!
3677 Adversarial AI chooses to play 'livre' at (13, 3
    ) (across) for 16 points
3678 This move limits opponent's maximum potential
    score to 34 points
3679 Adversarial AI plays 'livre' at (13, 3) across
    for 16 points!
3680
3681 Conservative AI's decision process:
3682 Choosing to play 'in' at (0, 13) (across) for 8
    points
3683 Move evaluation score: 33.2
3684 Rack balance after move: 0.97
3685 Conservative AI plays 'in' at (0, 13) across for
    8 points!
3686 Adversarial AI chooses to play 'gybe' at (12, 0
    ) (across) for 22 points
3687 This move limits opponent's maximum potential
    score to 12 points
3688 Adversarial AI plays 'gybe' at (12, 0) across for
    22 points!
3689
3690 Conservative AI's decision process:
```

```
3691 Choosing to play 'cel' at (11, 3) (down) for 10
    points
3692 Move evaluation score: 28.6
3693 Rack balance after move: 0.87
3694 Conservative AI plays 'cel' at (11, 3) down for
    10 points!
3695 Adversarial AI chooses to play 'dun' at (3, 1) (
    across) for 4 points
3696 This move limits opponent's maximum potential
    score to 18 points
3697 Adversarial AI plays 'dun' at (3, 1) across for 4
    points!
3698
3699 Conservative AI's decision process:
3700 Choosing to play 'loaves' at (9, 7) (down) for 9
    points
3701 Move evaluation score: 27.0
3702 Rack balance after move: 0.77
3703 Conservative AI plays 'loaves' at (9, 7) down for
    9 points!
3704 Adversarial AI chooses to play 'quit' at (9, 2) (
    across) for 13 points
3705 This move limits opponent's maximum potential
    score to 12 points
3706 Adversarial AI plays 'quit' at (9, 2) across for
    13 points!
3707
3708 Conservative AI's decision process:
3709 Choosing to play 'yo' at (12, 1) (down) for 10
    points
3710 Move evaluation score: 21.0
3711 Rack balance after move: 0.70
3712 Conservative AI plays 'yo' at (12, 1) down for 10
    points!
3713 Adversarial AI chooses to play 'yob' at (12, 1) (
    down) for 8 points
3714 This move limits opponent's maximum potential
    score to 7 points
3715 Adversarial AI plays 'yob' at (12, 1) down for 8
    points!
3716 Conservative AI plays 'dorr' at (5, 11) across
```

```
3716 for 7 points!
3717 Adversarial AI chooses to play 'gelt' at (3, 4) (down) for 11 points
3718 This move limits opponent's maximum potential score to 4 points
3719 Adversarial AI plays 'gelt' at (3, 4) down for 11 points!
3720 Conservative AI plays 'un' at (4, 10) across for 4 points!
3721 No moves available for Adversarial AI. Skipping turn.
3722 No moves available for Conservative AI. Skipping turn.
3723
3724 Neither player has any available moves. Game ending.
3725
3726 --- GAME OVER ---
3727 Final Board:
3728 __prior_oke_in
3729 __jo____aw_xis_
3730 ___i_troy__t___
3731 _dung_idea_e___
3732 ___deaf___un___
3733 ___l_fate_dorr
3734 ____t__hewn_____
3735 _____paleae_____
3736 ___sue_ash_____
3737 __quit_l_____
3738 ___mano_____
3739 __c__am_____
3740 gybe___vig_____
3741 _o_livre_et_____
3742 _b_____sonic___
3743 Board saved to 'assets/game_output.png'
3744
3745 Final Scores:
3746 Conservative AI: 2115 points
3747 Adversarial AI: 3499 points
3748
3749 Adversarial AI wins!
```

3750
3751 Game 4/5
3752 Conservative AI starts the game!
3753 Conservative AI plays 'ar' at (7, 7) across for 2 points!
3754
3755 Conservative AI's decision process:
3756 Choosing to play 'jo' at (7, 6) (down) for 20 points
3757 Move evaluation score: 24.6
3758 Rack balance after move: 0.63
3759 Conservative AI plays 'jo' at (7, 6) down for 20 points!
3760 Adversarial AI chooses to play 'wins' at (9, 6) (across) for 22 points
3761 This move limits opponent's maximum potential score to 16 points
3762 Adversarial AI plays 'wins' at (9, 6) across for 22 points!
3763
3764 Conservative AI's decision process:
3765 Choosing to play 'op' at (10, 9) (across) for 10 points
3766 Move evaluation score: 29.2
3767 Rack balance after move: 0.87
3768 Conservative AI plays 'op' at (10, 9) across for 10 points!
3769 Adversarial AI chooses to play 'bag' at (11, 9) (across) for 21 points
3770 This move limits opponent's maximum potential score to 20 points
3771 Adversarial AI plays 'bag' at (11, 9) across for 21 points!
3772
3773 Conservative AI's decision process:
3774 Choosing to play 'pah' at (10, 10) (down) for 8 points
3775 Move evaluation score: 28.8
3776 Rack balance after move: 0.79
3777 Conservative AI plays 'pah' at (10, 10) down for 8 points!

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3778 Adversarial AI chooses to play 'front' at (6, 8  
    ) (down) for 18 points  
3779 This move limits opponent's maximum potential  
    score to 38 points  
3780 Adversarial AI plays 'front' at (6, 8) down for  
    18 points!  
3781  
3782 Conservative AI's decision process:  
3783 Choosing to play 'jowl' at (7, 6) (down) for 14  
    points  
3784 Move evaluation score: 31.2  
3785 Rack balance after move: 0.79  
3786 Conservative AI plays 'jowl' at (7, 6) down for  
    14 points!  
3787 Adversarial AI chooses to play 'wavy' at (11, 3  
    ) (across) for 44 points  
3788 This move limits opponent's maximum potential  
    score to 21 points  
3789 Adversarial AI plays 'wavy' at (11, 3) across for  
    44 points!  
3790  
3791 Conservative AI's decision process:  
3792 Choosing to play 'var' at (10, 4) (down) for 12  
    points  
3793 Move evaluation score: 30.0  
3794 Rack balance after move: 0.87  
3795 Conservative AI plays 'var' at (10, 4) down for  
    12 points!  
3796 Adversarial AI chooses to play 'guan' at (5, 5) (down)  
    for 22 points  
3797 This move limits opponent's maximum potential  
    score to 25 points  
3798 Adversarial AI plays 'guan' at (5, 5) down for 22  
    points!  
3799  
3800 Conservative AI's decision process:  
3801 Choosing to play 'hoe' at (12, 10) (across) for  
    15 points  
3802 Move evaluation score: 32.4  
3803 Rack balance after move: 0.83  
3804 Conservative AI plays 'hoe' at (12, 10) across
```

3804 for 15 points!

3805 Adversarial AI chooses to play 'topee' at (10, 8) (across) for 11 points

3806 This move limits opponent's maximum potential score to 21 points

3807 Adversarial AI plays 'topee' at (10, 8) across for 11 points!

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3809 Conservative AI's decision process:

3810 Choosing to play 'lei' at (13, 12) (across) for 8 points

3811 Move evaluation score: 26.0

3812 Rack balance after move: 0.83

3813 Conservative AI plays 'lei' at (13, 12) across for 8 points!

3814 Adversarial AI chooses to play 'inia' at (11, 14) (down) for 15 points

3815 This move limits opponent's maximum potential score to 17 points

3816 Adversarial AI plays 'inia' at (11, 14) down for 15 points!

3817

3818 Conservative AI's decision process:

3819 Choosing to play 'ma' at (14, 13) (across) for 8 points

3820 Move evaluation score: 38.5

3821 Rack balance after move: 0.87

3822 Conservative AI plays 'ma' at (14, 13) across for 8 points!

3823 Adversarial AI chooses to play 'cor' at (12, 2) (across) for 15 points

3824 This move limits opponent's maximum potential score to 25 points

3825 Adversarial AI plays 'cor' at (12, 2) across for 15 points!

3826

3827 Conservative AI's decision process:

3828 Choosing to play 'wort' at (11, 3) (down) for 8 points

3829 Move evaluation score: 28.4

3830 Rack balance after move: 0.87

```
3831 Conservative AI plays 'wort' at (11, 3) down for
8 points!
3832 Adversarial AI chooses to play 'tabun' at (14, 3
) (across) for 21 points
3833 This move limits opponent's maximum potential
score to 21 points
3834 Adversarial AI plays 'tabun' at (14, 3) across
for 21 points!
3835
3836 Conservative AI's decision process:
3837 Choosing to play 'lea' at (5, 7) (down) for 8
points
3838 Move evaluation score: 21.8
3839 Rack balance after move: 0.59
3840 Conservative AI plays 'lea' at (5, 7) down for 8
points!
3841 Adversarial AI chooses to play 'id' at (4, 7) (
across) for 7 points
3842 This move limits opponent's maximum potential
score to 10 points
3843 Adversarial AI plays 'id' at (4, 7) across for 7
points!
3844
3845 Conservative AI's decision process:
3846 Choosing to play 'ria' at (13, 3) (across) for 19
points
3847 Move evaluation score: 38.0
3848 Rack balance after move: 0.44
3849 Conservative AI plays 'ria' at (13, 3) across for
19 points!
3850 Adversarial AI chooses to play 'gel' at (5, 5) (
across) for 4 points
3851 This move limits opponent's maximum potential
score to 28 points
3852 Adversarial AI plays 'gel' at (5, 5) across for 4
points!
3853
3854 Conservative AI's decision process:
3855 Choosing to play 'did' at (4, 6) (across) for 8
points
3856 Move evaluation score: 29.2
```

3857 Rack balance after move: 0.59
3858 Conservative AI plays 'did' at (4, 6) across for 8 points!
3859 Adversarial AI chooses to play 'rocs' at (3, 9) (down) for 24 points
3860 This move limits opponent's maximum potential score to 20 points
3861 Adversarial AI plays 'rocs' at (3, 9) down for 24 points!

3862

3863 Conservative AI's decision process:
3864 Choosing to play 'didoes' at (4, 6) (across) for 16 points
3865 Move evaluation score: 30.4
3866 Rack balance after move: 0.59
3867 Conservative AI plays 'didoes' at (4, 6) across for 16 points!
3868 Adversarial AI chooses to play 'lie' at (8, 12) (down) for 4 points
3869 This move limits opponent's maximum potential score to 16 points
3870 Adversarial AI plays 'lie' at (8, 12) down for 4 points!

3871

3872 Conservative AI's decision process:
3873 Choosing to play 'roe' at (3, 9) (across) for 12 points
3874 Move evaluation score: 30.0
3875 Rack balance after move: 0.59
3876 Conservative AI plays 'roe' at (3, 9) across for 12 points!
3877 Adversarial AI chooses to play 'prest' at (1, 11) (down) for 7 points
3878 This move limits opponent's maximum potential score to 20 points
3879 Adversarial AI plays 'prest' at (1, 11) down for 7 points!

3880

3881 Conservative AI's decision process:
3882 Choosing to play 'rein' at (2, 11) (across) for 8 points

```
3883 Move evaluation score: 32.5
3884 Rack balance after move: 0.83
3885 Conservative AI plays 'rein' at (2, 11) across
    for 8 points!
3886 Adversarial AI chooses to play 'tis' at (1, 13) (
    down) for 6 points
3887 This move limits opponent's maximum potential
    score to 12 points
3888 Adversarial AI plays 'tis' at (1, 13) down for 6
    points!
3889
3890 Conservative AI's decision process:
3891 Choosing to play 'presto' at (1, 11) (down) for 8
    points
3892 Move evaluation score: 30.0
3893 Rack balance after move: 0.87
3894 Conservative AI plays 'presto' at (1, 11) down
    for 8 points!
3895 Adversarial AI chooses to play 'fan' at (0, 14) (
    down) for 20 points
3896 This move limits opponent's maximum potential
    score to 35 points
3897 Adversarial AI plays 'fan' at (0, 14) down for 20
    points!
3898
3899 Conservative AI's decision process:
3900 Choosing to play 'tug' at (5, 11) (across) for 8
    points
3901 Move evaluation score: 31.0
3902 Rack balance after move: 0.69
3903 Conservative AI plays 'tug' at (5, 11) across for
    8 points!
3904 Adversarial AI chooses to play 'yeld' at (8, 10
    ) (across) for 8 points
3905 This move limits opponent's maximum potential
    score to 10 points
3906 Adversarial AI plays 'yeld' at (8, 10) across for
    8 points!
3907
3908 Conservative AI's decision process:
3909 Choosing to play 'oh' at (6, 11) (across) for 18
```

3909 points
3910 Move evaluation score: 29.6
3911 Rack balance after move: 0.64
3912 Conservative AI plays 'oh' at (6, 11) across for 18 points!
3913 Adversarial AI chooses to play 'zap' at (1, 9) (across) for 34 points
3914 This move limits opponent's maximum potential score to 12 points
3915 Adversarial AI plays 'zap' at (1, 9) across for 34 points!
3916
3917 Conservative AI's decision process:
3918 Choosing to play 'ink' at (13, 7) (across) for 19 points
3919 Move evaluation score: 27.4
3920 Rack balance after move: 0.79
3921 Conservative AI plays 'ink' at (13, 7) across for 19 points!
3922 Adversarial AI chooses to play 'ex' at (7, 13) (across) for 30 points
3923 This move limits opponent's maximum potential score to 6 points
3924 Adversarial AI plays 'ex' at (7, 13) across for 30 points!
3925 Conservative AI plays 'rude' at (2, 6) down for 6 points!
3926 Adversarial AI chooses to play 'de' at (12, 7) (across) for 11 points
3927 This move limits opponent's maximum potential score to 2 points
3928 Adversarial AI plays 'de' at (12, 7) across for 11 points!
3929 Conservative AI plays 'ti' at (11, 13) across for 2 points!
3930 Adversarial AI chooses to play 'ma' at (0, 10) (down) for 4 points
3931 This move limits opponent's maximum potential score to 0 points
3932 Adversarial AI plays 'ma' at (0, 10) down for 4 points!

```
3933 No moves available for Conservative AI. Skipping turn.  
3934 No moves available for Adversarial AI. Skipping turn.  
3935  
3936 Neither player has any available moves. Game ending.  
3937  
3938 --- GAME OVER ---  
3939 Final Board:  
3940 _____m___f  
3941 _____zap_ta  
3942 _____r____rein  
3943 _____u__roe_s_  
3944 _____didoes___  
3945 _____gel_c_tug_  
3946 _____u_efs_oh__  
3947 _____ajar____ex  
3948 _____no_o_yeld_  
3949 _____wins__i__  
3950 ____v_l_topee__  
3951 ___wavy__bag_ti  
3952 __cor__de_hoe_n  
3953 __ria_ink__lei  
3954 __tabun_____ma  
3955 Board saved to 'assets/game_output.png'  
3956  
3957 Final Scores:  
3958 Conservative AI: 2352 points  
3959 Adversarial AI: 3847 points  
3960  
3961 Adversarial AI wins!  
3962  
3963 Game 5/5  
3964 Adversarial AI starts the game!  
3965 Adversarial AI plays 'et' at (7, 7) across for 2 points!  
3966 Adversarial AI chooses to play 'alts' at (6, 6) (down) for 9 points  
3967 This move limits opponent's maximum potential score to 16 points
```

```
3968 Adversarial AI plays 'alts' at (6, 6) down for 9
    points!
3969
3970 Conservative AI's decision process:
3971 Choosing to play 'ay' at (6, 6) (across) for 10
    points
3972 Move evaluation score: 29.6
3973 Rack balance after move: 0.63
3974 Conservative AI plays 'ay' at (6, 6) across for
    10 points!
3975 Adversarial AI chooses to play 'yeah' at (6, 7) (
    down) for 17 points
3976 This move limits opponent's maximum potential
    score to 22 points
3977 Adversarial AI plays 'yeah' at (6, 7) down for 17
    points!
3978
3979 Conservative AI's decision process:
3980 Choosing to play 'aye' at (6, 6) (across) for 10
    points
3981 Move evaluation score: 29.6
3982 Rack balance after move: 0.49
3983 Conservative AI plays 'aye' at (6, 6) across for
    10 points!
3984 Adversarial AI chooses to play 'shit' at (9, 6) (
    across) for 9 points
3985 This move limits opponent's maximum potential
    score to 14 points
3986 Adversarial AI plays 'shit' at (9, 6) across for
    9 points!
3987
3988 Conservative AI's decision process:
3989 Choosing to play 'tau' at (8, 6) (across) for 9
    points
3990 Move evaluation score: 36.5
3991 Rack balance after move: 0.39
3992 Conservative AI plays 'tau' at (8, 6) across for
    9 points!
3993 Adversarial AI chooses to play 'vees' at (6, 10
    ) (down) for 15 points
3994 This move limits opponent's maximum potential
```

```
3994 score to 24 points
3995 Adversarial AI plays 'vees' at (6, 10) down for
    15 points!
3996
3997 Conservative AI's decision process:
3998 Choosing to play 'valor' at (6, 10) (across) for
    9 points
3999 Move evaluation score: 22.0
4000 Rack balance after move: 0.63
4001 Conservative AI plays 'valor' at (6, 10) across
    for 9 points!
4002 Adversarial AI chooses to play 'voe' at (5, 13) (
    down) for 14 points
4003 This move limits opponent's maximum potential
    score to 13 points
4004 Adversarial AI plays 'voe' at (5, 13) down for 14
    points!
4005
4006 Conservative AI's decision process:
4007 Choosing to play 'lev' at (5, 11) (across) for 10
    points
4008 Move evaluation score: 28.0
4009 Rack balance after move: 0.73
4010 Conservative AI plays 'lev' at (5, 11) across for
    10 points!
4011 Adversarial AI chooses to play 'fee' at (7, 12) (
    across) for 30 points
4012 This move limits opponent's maximum potential
    score to 18 points
4013 Adversarial AI plays 'fee' at (7, 12) across for
    30 points!
4014
4015 Conservative AI's decision process:
4016 Choosing to play 'levo' at (5, 11) (across) for
    10 points
4017 Move evaluation score: 32.8
4018 Rack balance after move: 0.73
4019 Conservative AI plays 'levo' at (5, 11) across
    for 10 points!
4020 Adversarial AI chooses to play 'ex' at (8, 10) (
    across) for 9 points
```

4021 This move limits opponent's maximum potential score to 23 points
4022 Adversarial AI plays 'ex' at (8, 10) across for 9 points!
4023
4024 Conservative AI's decision process:
4025 Choosing to play 'pelf' at (4, 12) (down) for 9 points
4026 Move evaluation score: 32.4
4027 Rack balance after move: 0.97
4028 Conservative AI plays 'pelf' at (4, 12) down for 9 points!
4029 Adversarial AI chooses to play 'foreby' at (4, 14) (down) for 14 points
4030 This move limits opponent's maximum potential score to 12 points
4031 Adversarial AI plays 'foreby' at (4, 14) down for 14 points!
4032
4033 Conservative AI's decision process:
4034 Choosing to play 'forebye' at (4, 14) (down) for 15 points
4035 Move evaluation score: 31.0
4036 Rack balance after move: 0.97
4037 Conservative AI plays 'forebye' at (4, 14) down for 15 points!
4038 Adversarial AI chooses to play 'quillet' at (7, 2) (across) for 17 points
4039 This move limits opponent's maximum potential score to 21 points
4040 Adversarial AI plays 'quillet' at (7, 2) across for 17 points!
4041
4042 Conservative AI's decision process:
4043 Choosing to play 'gizmo' at (6, 4) (down) for 34 points
4044 Move evaluation score: 33.2
4045 Rack balance after move: 0.89
4046 Conservative AI plays 'gizmo' at (6, 4) down for 34 points!
4047 Adversarial AI chooses to play 'mick' at (10, 5

4047) (down) for 26 points
4048 This move limits opponent's maximum potential score to 27 points
4049 Adversarial AI plays 'mick' at (10, 5) down for 26 points!
4050
4051 Conservative AI's decision process:
4052 Choosing to play 'sow' at (14, 5) (across) for 31 points
4053 Move evaluation score: 44.0
4054 Rack balance after move: 0.97
4055 Conservative AI plays 'sow' at (14, 5) across for 31 points!
4056 Adversarial AI chooses to play 'ant' at (9, 13) (down) for 14 points
4057 This move limits opponent's maximum potential score to 11 points
4058 Adversarial AI plays 'ant' at (9, 13) down for 14 points!
4059
4060 Conservative AI's decision process:
4061 Choosing to play 'knot' at (13, 5) (across) for 15 points
4062 Move evaluation score: 31.5
4063 Rack balance after move: 0.59
4064 Conservative AI plays 'knot' at (13, 5) across for 15 points!
4065 Adversarial AI chooses to play 'wud' at (12, 7) (across) for 20 points
4066 This move limits opponent's maximum potential score to 28 points
4067 Adversarial AI plays 'wud' at (12, 7) across for 20 points!
4068
4069 Conservative AI's decision process:
4070 Choosing to play 'oe' at (11, 8) (across) for 8 points
4071 Move evaluation score: 24.8
4072 Rack balance after move: 0.10
4073 Conservative AI plays 'oe' at (11, 8) across for 8 points!

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4074 Adversarial AI chooses to play 'teind' at (10, 3
) (down) for 21 points
4075 This move limits opponent's maximum potential
score to 25 points
4076 Adversarial AI plays 'teind' at (10, 3) down for
21 points!
4077
4078 Conservative AI's decision process:
4079 Choosing to play 'antae' at (9, 13) (down) for 10
points
4080 Move evaluation score: 26.8
4081 Rack balance after move: 0.44
4082 Conservative AI plays 'antae' at (9, 13) down for
10 points!
4083 Adversarial AI chooses to play 'soap' at (9, 12
) (down) for 31 points
4084 This move limits opponent's maximum potential
score to 24 points
4085 Adversarial AI plays 'soap' at (9, 12) down for
31 points!
4086
4087 Conservative AI's decision process:
4088 Choosing to play 'irid' at (14, 0) (across) for
15 points
4089 Move evaluation score: 28.8
4090 Rack balance after move: 0.73
4091 Conservative AI plays 'irid' at (14, 0) across
for 15 points!
4092 Adversarial AI chooses to play 'ne' at (10, 11) (
down) for 14 points
4093 This move limits opponent's maximum potential
score to 21 points
4094 Adversarial AI plays 'ne' at (10, 11) down for 14
points!
4095
4096 Conservative AI's decision process:
4097 Choosing to play 'ha' at (13, 0) (across) for 19
points
4098 Move evaluation score: 34.0
4099 Rack balance after move: 0.97
4100 Conservative AI plays 'ha' at (13, 0) across for
```

```
4100 19 points!
4101 Adversarial AI chooses to play 'chi' at (12, 0) (down) for 8 points
4102 This move limits opponent's maximum potential score to 15 points
4103 Adversarial AI plays 'chi' at (12, 0) down for 8 points!
4104
4105 Conservative AI's decision process:
4106 Choosing to play 'coni' at (12, 0) (across) for 15 points
4107 Move evaluation score: 32.4
4108 Rack balance after move: 0.97
4109 Conservative AI plays 'coni' at (12, 0) across for 15 points!
4110 Adversarial AI chooses to play 'pan' at (12, 12) (across) for 5 points
4111 This move limits opponent's maximum potential score to 18 points
4112 Adversarial AI plays 'pan' at (12, 12) across for 5 points!
4113
4114 Conservative AI's decision process:
4115 Choosing to play 'rue' at (11, 1) (across) for 9 points
4116 Move evaluation score: 30.0
4117 Rack balance after move: 0.97
4118 Conservative AI plays 'rue' at (11, 1) across for 9 points!
4119 Adversarial AI chooses to play 'tied' at (9, 9) (down) for 5 points
4120 This move limits opponent's maximum potential score to 25 points
4121 Adversarial AI plays 'tied' at (9, 9) down for 5 points!
4122
4123 Conservative AI's decision process:
4124 Choosing to play 'dap' at (4, 10) (across) for 15 points
4125 Move evaluation score: 25.9
4126 Rack balance after move: 0.77
```

```
4127 Conservative AI plays 'dap' at (4, 10) across for
    15 points!
4128 Adversarial AI chooses to play 'jig' at (3, 9) (
    across) for 35 points
4129 This move limits opponent's maximum potential
    score to 11 points
4130 Adversarial AI plays 'jig' at (3, 9) across for
    35 points!
4131
4132 Conservative AI's decision process:
4133 Choosing to play 'gadid' at (0, 10) (down) for 8
    points
4134 Move evaluation score: 20.0
4135 Rack balance after move: 1.00
4136 Conservative AI plays 'gadid' at (0, 10) down for
    8 points!
4137 Adversarial AI chooses to play 'ar' at (1, 10) (
    across) for 2 points
4138 This move limits opponent's maximum potential
    score to 13 points
4139 Adversarial AI plays 'ar' at (1, 10) across for 2
    points!
4140
4141 Conservative AI's decision process:
4142 Choosing to play 'bar' at (1, 9) (across) for 11
    points
4143 Move evaluation score: 10.2
4144 Rack balance after move: 0.90
4145 Conservative AI plays 'bar' at (1, 9) across for
    11 points!
4146 No moves available for Adversarial AI. Skipping
    turn.
4147 No moves available for Conservative AI. Skipping
    turn.
4148
4149 Neither player has any available moves. Game
    ending.
4150
4151 --- GAME OVER ---
4152 Final Board:
4153 -----g-----
```

```
4154 -----bar___
4155 -----d___
4156 -----jig___
4157 -----dap_f
4158 -----levo
4159 ___g_aye_valor
4160 __quillet_e_fee
4161 ___z_tau_ex__b
4162 ___m_shits_say
4163 ___tom___i_none
4164 _rue_i__oe_eat_
4165 coni_c_wud__pan
4166 ha_n_knot____e_
4167 irid_sow_____
4168 Board saved to 'assets/game_output.png'
4169
4170 Final Scores:
4171 Conservative AI: 2624 points
4172 Adversarial AI: 4164 points
4173
4174 Adversarial AI wins!
4175
4176 Playing matches between MCTS AI and Conservative
    AI
4177
4178 Game 1/5
4179 Conservative AI starts the game!
4180 Conservative AI plays 'et' at (7, 7) across for 2
    points!
4181
4182 Conservative AI's decision process:
4183 Choosing to play 'adz' at (7, 9) (down) for 36
    points
4184 Move evaluation score: 25.9
4185 Rack balance after move: 0.89
4186 Conservative AI plays 'adz' at (7, 9) down for 36
    points!
4187
4188 MCTS AI's decision process:
4189 Choosing to play 'wears' at (10, 8) (across) for
    30 points
```

4190 Expected net score advantage: 4.7 points
4191 Based on 10 simulated opponent responses
4192 MCTS AI plays 'wears' at (10, 8) across for 30 points!
4193
4194 Conservative AI's decision process:
4195 Choosing to play 'adzes' at (7, 9) (down) for 15 points
4196 Move evaluation score: 29.8
4197 Rack balance after move: 0.79
4198 Conservative AI plays 'adzes' at (7, 9) down for 15 points!
4199
4200 MCTS AI's decision process:
4201 Choosing to play 'unarm' at (7, 11) (down) for 16 points
4202 Expected net score advantage: -4.0 points
4203 Based on 10 simulated opponent responses
4204 MCTS AI plays 'unarm' at (7, 11) down for 16 points!
4205
4206 Conservative AI's decision process:
4207 Choosing to play 'pe' at (6, 7) (across) for 12 points
4208 Move evaluation score: 25.8
4209 Rack balance after move: 0.77
4210 Conservative AI plays 'pe' at (6, 7) across for 12 points!
4211
4212 MCTS AI's decision process:
4213 Choosing to play 'tomb' at (5, 6) (across) for 24 points
4214 Expected net score advantage: 0.9 points
4215 Based on 10 simulated opponent responses
4216 MCTS AI plays 'tomb' at (5, 6) across for 24 points!
4217
4218 Conservative AI's decision process:
4219 Choosing to play 'ope' at (6, 6) (across) for 9 points
4220 Move evaluation score: 28.2

```
4221 Rack balance after move: 0.63
4222 Conservative AI plays 'ope' at (6, 6) across for
9 points!
4223
4224 MCTS AI's decision process:
4225 Choosing to play 'weight' at (2, 12) (down) for
36 points
4226 Expected net score advantage: 5.7 points
4227 Based on 10 simulated opponent responses
4228 MCTS AI plays 'weight' at (2, 12) down for 36
points!
4229
4230 Conservative AI's decision process:
4231 Choosing to play 'dens' at (8, 9) (across) for 21
points
4232 Move evaluation score: 38.2
4233 Rack balance after move: 0.87
4234 Conservative AI plays 'dens' at (8, 9) across for
21 points!
4235
4236 MCTS AI's decision process:
4237 Choosing to play 'defines' at (11, 3) (across)
for 29 points
4238 Expected net score advantage: 1.3 points
4239 Based on 10 simulated opponent responses
4240 MCTS AI plays 'defines' at (11, 3) across for 29
points!
4241
4242 Conservative AI's decision process:
4243 Choosing to play 'jeu' at (10, 4) (down) for 20
points
4244 Move evaluation score: 33.2
4245 Rack balance after move: 0.87
4246 Conservative AI plays 'jeu' at (10, 4) down for
20 points!
4247
4248 MCTS AI's decision process:
4249 Choosing to play 'cap' at (1, 11) (down) for 27
points
4250 Expected net score advantage: -0.5 points
4251 Based on 10 simulated opponent responses
```

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4252 MCTS AI plays 'cap' at (1, 11) down for 27 points
!
4253
4254 Conservative AI's decision process:
4255 Choosing to play 'well' at (10, 8) (down) for 8
    points
4256 Move evaluation score: 29.6
4257 Rack balance after move: 0.79
4258 Conservative AI plays 'well' at (10, 8) down for
    8 points!
4259
4260 MCTS AI's decision process:
4261 Choosing to play 'vied' at (0, 13) (down) for 28
    points
4262 Expected net score advantage: 3.2 points
4263 Based on 10 simulated opponent responses
4264 MCTS AI plays 'vied' at (0, 13) down for 28
    points!
4265
4266 Conservative AI's decision process:
4267 Choosing to play 'ava' at (0, 12) (across) for 18
    points
4268 Move evaluation score: 33.6
4269 Rack balance after move: 0.73
4270 Conservative AI plays 'ava' at (0, 12) across for
    18 points!
4271
4272 MCTS AI's decision process:
4273 Choosing to play 'hour' at (6, 5) (down) for 18
    points
4274 Expected net score advantage: -9.0 points
4275 Based on 10 simulated opponent responses
4276 MCTS AI plays 'hour' at (6, 5) down for 18 points
    !
4277
4278 Conservative AI's decision process:
4279 Choosing to play 'xi' at (13, 4) (across) for 29
    points
4280 Move evaluation score: 38.0
4281 Rack balance after move: 0.97
4282 Conservative AI plays 'xi' at (13, 4) across for
```

4282 29 points!

4283

4284 MCTS AI's decision process:

4285 Choosing to play 'fog' at (14, 5) (across) for 26 points

4286 Expected net score advantage: 3.6 points

4287 Based on 10 simulated opponent responses

4288 MCTS AI plays 'fog' at (14, 5) across for 26 points!

4289

4290 Conservative AI's decision process:

4291 Choosing to play 'urn' at (8, 5) (across) for 10 points

4292 Move evaluation score: 35.0

4293 Rack balance after move: 0.77

4294 Conservative AI plays 'urn' at (8, 5) across for 10 points!

4295

4296 MCTS AI's decision process:

4297 Choosing to play 'catalo' at (7, 0) (across) for 27 points

4298 Expected net score advantage: 3.9 points

4299 Based on 10 simulated opponent responses

4300 MCTS AI plays 'catalo' at (7, 0) across for 27 points!

4301

4302 Conservative AI's decision process:

4303 Choosing to play 'fogs' at (14, 5) (across) for 16 points

4304 Move evaluation score: 42.5

4305 Rack balance after move: 0.87

4306 Conservative AI plays 'fogs' at (14, 5) across for 16 points!

4307

4308 MCTS AI's decision process:

4309 Choosing to play 'loaned' at (13, 8) (across) for 18 points

4310 Expected net score advantage: -4.4 points

4311 Based on 10 simulated opponent responses

4312 MCTS AI plays 'loaned' at (13, 8) across for 18 points!

4313
4314 Conservative AI's decision process:
4315 Choosing to play 'oleo' at (14, 11) (across) for
23 points
4316 Move evaluation score: 36.0
4317 Rack balance after move: 0.63
4318 Conservative AI plays 'oleo' at (14, 11) across
for 23 points!
4319
4320 MCTS AI's decision process:
4321 Choosing to play 'quag' at (5, 1) (down) for 34
points
4322 Expected net score advantage: 16.5 points
4323 Based on 10 simulated opponent responses
4324 MCTS AI plays 'quag' at (5, 1) down for 34 points
!
4325
4326 Conservative AI's decision process:
4327 Choosing to play 'gey' at (5, 12) (across) for 9
points
4328 Move evaluation score: 31.5
4329 Rack balance after move: 0.79
4330 Conservative AI plays 'gey' at (5, 12) across for
9 points!
4331
4332 MCTS AI's decision process:
4333 Choosing to play 'gib' at (8, 1) (across) for 14
points
4334 Expected net score advantage: -9.2 points
4335 Based on 10 simulated opponent responses
4336 MCTS AI plays 'gib' at (8, 1) across for 14
points!
4337
4338 Conservative AI's decision process:
4339 Choosing to play 'ryot' at (4, 14) (down) for 21
points
4340 Move evaluation score: 22.8
4341 Rack balance after move: 0.54
4342 Conservative AI plays 'ryot' at (4, 14) down for
21 points!
4343

```
4344 MCTS AI's decision process:  
4345 Choosing to play 'mirk' at (11, 11) (across) for  
    17 points  
4346 Expected net score advantage: 7.0 points  
4347 Based on 10 simulated opponent responses  
4348 MCTS AI plays 'mirk' at (11, 11) across for 17  
    points!  
4349  
4350 Conservative AI's decision process:  
4351 Choosing to play 'tivy' at (7, 2) (down) for 10  
    points  
4352 Move evaluation score: 23.8  
4353 Rack balance after move: 0.67  
4354 Conservative AI plays 'tivy' at (7, 2) down for  
    10 points!  
4355  
4356 MCTS AI's decision process:  
4357 Choosing to play 'exit' at (13, 3) (across) for  
    13 points  
4358 Expected net score advantage: 5.0 points  
4359 Based on 10 simulated opponent responses  
4360 MCTS AI plays 'exit' at (13, 3) across for 13  
    points!  
4361  
4362 Conservative AI's decision process:  
4363 Choosing to play 'riped' at (3, 9) (across) for 8  
    points  
4364 Move evaluation score: 11.2  
4365 Rack balance after move: 0.75  
4366 Conservative AI plays 'riped' at (3, 9) across  
    for 8 points!  
4367  
4368 MCTS AI's decision process:  
4369 Choosing to play 'ride' at (11, 13) (down) for 5  
    points  
4370 Expected net score advantage: 0.0 points  
4371 Based on 10 simulated opponent responses  
4372 MCTS AI plays 'ride' at (11, 13) down for 5  
    points!  
4373 Conservative AI plays 'nab' at (6, 3) down for 5  
    points!
```

```
4374
4375 MCTS AI's decision process:
4376 Choosing to play 'rib' at (3, 9) (down) for 5
    points
4377 Expected net score advantage: -3.0 points
4378 Based on 10 simulated opponent responses
4379 MCTS AI plays 'rib' at (3, 9) down for 5 points!
4380
4381 Conservative AI's decision process:
4382 Choosing to play 'in' at (4, 9) (across) for 8
    points
4383 Move evaluation score: 4.0
4384 Rack balance after move: 0.60
4385 Conservative AI plays 'in' at (4, 9) across for 8
    points!
4386 No moves available for MCTS AI. Skipping turn.
4387 No moves available for Conservative AI. Skipping
    turn.
4388
4389 Neither player has any available moves. Game
    ending.
4390
4391 --- GAME OVER ---
4392 Final Board:
4393 _____ava
4394 _____c_i_
4395 _____awe_
4396 _____riped_
4397 _____in_i_r
4398 _q____tomb__gey
4399 _u_n_hope___h_o
4400 catalo_eta_ut_t
4401 _gib_urn_dens__
4402 __v__r___z_a___
4403 __y_j___wears__
4404 __defines_mirk
4405 ___u___l___i_
4406 __exit_loaned_
4407 ____fogs__oleo
4408 Board saved to 'assets/game_output.png'
4409
```

```
4410 Final Scores:  
4411 MCTS AI: 3681 points  
4412 Conservative AI: 2904 points  
4413  
4414 MCTS AI wins!  
4415  
4416 Game 2/5  
4417 MCTS AI starts the game!  
4418 MCTS AI plays 'ox' at (7, 7) across for 9 points!  
4419  
4420 MCTS AI's decision process:  
4421 Choosing to play 'bio' at (5, 9) (down) for 21  
    points  
4422 Expected net score advantage: -4.2 points  
4423 Based on 10 simulated opponent responses  
4424 MCTS AI plays 'bio' at (5, 9) down for 21 points!  
4425  
4426 Conservative AI's decision process:  
4427 Choosing to play 'ai' at (6, 8) (across) for 13  
    points  
4428 Move evaluation score: 32.8  
4429 Rack balance after move: 0.73  
4430 Conservative AI plays 'ai' at (6, 8) across for  
    13 points!  
4431  
4432 MCTS AI's decision process:  
4433 Choosing to play 'hes' at (8, 7) (across) for 29  
    points  
4434 Expected net score advantage: 4.3 points  
4435 Based on 10 simulated opponent responses  
4436 MCTS AI plays 'hes' at (8, 7) across for 29  
    points!  
4437  
4438 Conservative AI's decision process:  
4439 Choosing to play 'bah' at (5, 9) (across) for 8  
    points  
4440 Move evaluation score: 28.4  
4441 Rack balance after move: 0.97  
4442 Conservative AI plays 'bah' at (5, 9) across for  
    8 points!  
4443
```

```
4444 MCTS AI's decision process:  
4445 Choosing to play 'tui' at (4, 10) (across) for 15  
    points  
4446 Expected net score advantage: -8.4 points  
4447 Based on 10 simulated opponent responses  
4448 MCTS AI plays 'tui' at (4, 10) across for 15  
    points!  
4449  
4450 Conservative AI's decision process:  
4451 Choosing to play 'axed' at (6, 8) (down) for 12  
    points  
4452 Move evaluation score: 28.6  
4453 Rack balance after move: 0.89  
4454 Conservative AI plays 'axed' at (6, 8) down for  
    12 points!  
4455  
4456 MCTS AI's decision process:  
4457 Choosing to play 'zee' at (3, 8) (across) for 15  
    points  
4458 Expected net score advantage: -7.3 points  
4459 Based on 10 simulated opponent responses  
4460 MCTS AI plays 'zee' at (3, 8) across for 15  
    points!  
4461  
4462 Conservative AI's decision process:  
4463 Choosing to play 'fig' at (2, 10) (across) for 21  
    points  
4464 Move evaluation score: 27.0  
4465 Rack balance after move: 0.89  
4466 Conservative AI plays 'fig' at (2, 10) across for  
    21 points!  
4467  
4468 MCTS AI's decision process:  
4469 Choosing to play 'fail' at (6, 7) (across) for 24  
    points  
4470 Expected net score advantage: 2.7 points  
4471 Based on 10 simulated opponent responses  
4472 MCTS AI plays 'fail' at (6, 7) across for 24  
    points!  
4473  
4474 Conservative AI's decision process:
```

```
4475 Choosing to play 'jus' at (0, 13) (down) for 28
      points
4476 Move evaluation score: 34.0
4477 Rack balance after move: 0.97
4478 Conservative AI plays 'jus' at (0, 13) down for
      28 points!
4479
4480 MCTS AI's decision process:
4481 Choosing to play 'item' at (4, 12) (down) for 16
      points
4482 Expected net score advantage: -10.5 points
4483 Based on 10 simulated opponent responses
4484 MCTS AI plays 'item' at (4, 12) down for 16
      points!
4485
4486 Conservative AI's decision process:
4487 Choosing to play 'mew' at (7, 12) (across) for 24
      points
4488 Move evaluation score: 31.2
4489 Rack balance after move: 0.79
4490 Conservative AI plays 'mew' at (7, 12) across for
      24 points!
4491
4492 MCTS AI's decision process:
4493 Choosing to play 'jo' at (0, 13) (across) for 27
      points
4494 Expected net score advantage: 2.8 points
4495 Based on 10 simulated opponent responses
4496 MCTS AI plays 'jo' at (0, 13) across for 27
      points!
4497
4498 Conservative AI's decision process:
4499 Choosing to play 'rerig' at (6, 13) (down) for 10
      points
4500 Move evaluation score: 24.2
4501 Rack balance after move: 0.79
4502 Conservative AI plays 'rerig' at (6, 13) down for
      10 points!
4503
4504 MCTS AI's decision process:
4505 Choosing to play 'lez' at (1, 8) (down) for 13
```

4505 points
4506 Expected net score advantage: -9.3 points
4507 Based on 10 simulated opponent responses
4508 MCTS AI plays 'lez' at (1, 8) down for 13 points!
4509
4510 Conservative AI's decision process:
4511 Choosing to play 'um' at (1, 13) (across) for 8 points
4512 Move evaluation score: 40.0
4513 Rack balance after move: 0.87
4514 Conservative AI plays 'um' at (1, 13) across for 8 points!
4515
4516 MCTS AI's decision process:
4517 Choosing to play 'kep' at (0, 7) (down) for 33 points
4518 Expected net score advantage: 7.6 points
4519 Based on 10 simulated opponent responses
4520 MCTS AI plays 'kep' at (0, 7) down for 33 points!
4521
4522 Conservative AI's decision process:
4523 Choosing to play 'ick' at (0, 5) (across) for 9 points
4524 Move evaluation score: 30.0
4525 Rack balance after move: 0.87
4526 Conservative AI plays 'ick' at (0, 5) across for 9 points!
4527
4528 MCTS AI's decision process:
4529 Choosing to play 'tav' at (8, 10) (down) for 19 points
4530 Expected net score advantage: -9.3 points
4531 Based on 10 simulated opponent responses
4532 MCTS AI plays 'tav' at (8, 10) down for 19 points!
4533
4534 Conservative AI's decision process:
4535 Choosing to play 'wick' at (0, 4) (across) for 13 points
4536 Move evaluation score: 34.0
4537 Rack balance after move: 0.87

4538 Conservative AI plays 'wick' at (0, 4) across for 13 points!

4539

4540 MCTS AI's decision process:

4541 Choosing to play 'any' at (10, 12) (down) for 15 points

4542 Expected net score advantage: -10.1 points

4543 Based on 10 simulated opponent responses

4544 MCTS AI plays 'any' at (10, 12) down for 15 points!

4545

4546 Conservative AI's decision process:

4547 Choosing to play 'sons' at (11, 10) (across) for 22 points

4548 Move evaluation score: 30.4

4549 Rack balance after move: 0.87

4550 Conservative AI plays 'sons' at (11, 10) across for 22 points!

4551

4552 MCTS AI's decision process:

4553 Choosing to play 'ta' at (3, 13) (across) for 14 points

4554 Expected net score advantage: -9.1 points

4555 Based on 10 simulated opponent responses

4556 MCTS AI plays 'ta' at (3, 13) across for 14 points!

4557

4558 Conservative AI's decision process:

4559 Choosing to play 'ewe' at (6, 14) (down) for 11 points

4560 Move evaluation score: 27.2

4561 Rack balance after move: 0.49

4562 Conservative AI plays 'ewe' at (6, 14) down for 11 points!

4563

4564 MCTS AI's decision process:

4565 Choosing to play 'wienie' at (0, 4) (down) for 18 points

4566 Expected net score advantage: -8.0 points

4567 Based on 10 simulated opponent responses

4568 MCTS AI plays 'wienie' at (0, 4) down for 18

```
4568 points!
4569
4570 Conservative AI's decision process:
4571 Choosing to play 'in' at (1, 4) (across) for 8
    points
4572 Move evaluation score: 36.0
4573 Rack balance after move: 0.73
4574 Conservative AI plays 'in' at (1, 4) across for 8
    points!
4575
4576 MCTS AI's decision process:
4577 Choosing to play 'gnat' at (1, 3) (down) for 22
    points
4578 Expected net score advantage: 0.4 points
4579 Based on 10 simulated opponent responses
4580 MCTS AI plays 'gnat' at (1, 3) down for 22 points
    !
4581
4582 Conservative AI's decision process:
4583 Choosing to play 'pa' at (0, 2) (down) for 9
    points
4584 Move evaluation score: 26.4
4585 Rack balance after move: 0.73
4586 Conservative AI plays 'pa' at (0, 2) down for 9
    points!
4587
4588 MCTS AI's decision process:
4589 Choosing to play 'dato' at (5, 5) (down) for 17
    points
4590 Expected net score advantage: -6.5 points
4591 Based on 10 simulated opponent responses
4592 MCTS AI plays 'dato' at (5, 5) down for 17 points
    !
4593
4594 Conservative AI's decision process:
4595 Choosing to play 'alp' at (0, 0) (across) for 15
    points
4596 Move evaluation score: 28.8
4597 Rack balance after move: 0.73
4598 Conservative AI plays 'alp' at (0, 0) across for
    15 points!
```

4599
4600 MCTS AI's decision process:
4601 Choosing to play 'aroointed' at (0, 0) (down) for 30 points
4602 Expected net score advantage: 7.0 points
4603 Based on 10 simulated opponent responses
4604 MCTS AI plays 'aroointed' at (0, 0) down for 80 points!
4605
4606 Conservative AI's decision process:
4607 Choosing to play 'or' at (5, 1) (down) for 10 points
4608 Move evaluation score: 22.4
4609 Rack balance after move: 0.77
4610 Conservative AI plays 'or' at (5, 1) down for 10 points!
4611
4612 MCTS AI's decision process:
4613 Choosing to play 'boric' at (8, 4) (down) for 22 points
4614 Expected net score advantage: 10.0 points
4615 Based on 10 simulated opponent responses
4616 MCTS AI plays 'boric' at (8, 4) down for 22 points!
4617
4618 Conservative AI's decision process:
4619 Choosing to play 'ivy' at (11, 4) (across) for 9 points
4620 Move evaluation score: 31.5
4621 Rack balance after move: 0.83
4622 Conservative AI plays 'ivy' at (11, 4) across for 9 points!
4623
4624 MCTS AI's decision process:
4625 Choosing to play 'ern' at (6, 0) (across) for 4 points
4626 Expected net score advantage: -1.0 points
4627 Based on 10 simulated opponent responses
4628 MCTS AI plays 'ern' at (6, 0) across for 4 points!
4629 Conservative AI plays 'ell' at (1, 7) across for

```
4629 5 points!
4630 No moves available for MCTS AI. Skipping turn.
4631 Conservative AI plays 'ran' at (3, 2) across for
3 points!
4632 No moves available for MCTS AI. Skipping turn.
4633 Conservative AI plays 'nu' at (6, 2) down for 2
points!
4634 No moves available for MCTS AI. Skipping turn.
4635 No moves available for Conservative AI. Skipping
turn.
4636
4637 Neither player has any available moves. Game
ending.
4638
4639 --- GAME OVER ---
4640 Final Board:
4641 alp_wick____jo
4642 r_agin_ell___um
4643 o_ne_pe_figs_
4644 i_ran__zee_ta
4645 n_ti____tui__
4646 to_ed__baht__
4647 ern_a_fail_ere
4648 d_u_d_oxo_mew
4649 ___bo_hest_re
4650 ___o_d_a_i_
4651 ___r_v_ag_
4652 ___ivy_sons_
4653 ___c_y__
4654 -----
4655 -----
4656 Board saved to 'assets/game_output.png'
4657
4658 Final Scores:
4659 MCTS AI: 4094 points
4660 Conservative AI: 3144 points
4661
4662 MCTS AI wins!
4663
4664 Game 3/5
4665 MCTS AI starts the game!
```

```
4666 MCTS AI plays 'ma' at (7, 7) across for 4 points!
4667
4668 MCTS AI's decision process:
4669 Choosing to play 'jeez' at (6, 9) (down) for 45
    points
4670 Expected net score advantage: 17.3 points
4671 Based on 10 simulated opponent responses
4672 MCTS AI plays 'jeez' at (6, 9) down for 45 points
    !
4673
4674 Conservative AI's decision process:
4675 Choosing to play 'we' at (8, 8) (across) for 18
    points
4676 Move evaluation score: 32.0
4677 Rack balance after move: 0.74
4678 Conservative AI plays 'we' at (8, 8) across for
    18 points!
4679
4680 MCTS AI's decision process:
4681 Choosing to play 'yowed' at (8, 6) (across) for
    20 points
4682 Expected net score advantage: -2.5 points
4683 Based on 10 simulated opponent responses
4684 MCTS AI plays 'yowed' at (8, 6) across for 20
    points!
4685
4686 Conservative AI's decision process:
4687 Choosing to play 'lez' at (9, 7) (across) for 23
    points
4688 Move evaluation score: 32.0
4689 Rack balance after move: 0.89
4690 Conservative AI plays 'lez' at (9, 7) across for
    23 points!
4691
4692 MCTS AI's decision process:
4693 Choosing to play 'rants' at (10, 4) (across) for
    23 points
4694 Expected net score advantage: -2.0 points
4695 Based on 10 simulated opponent responses
4696 MCTS AI plays 'rants' at (10, 4) across for 23
    points!
```

4697
4698 Conservative AI's decision process:
4699 Choosing to play 'ay' at (9, 4) (across) for 28 points
4700 Move evaluation score: 34.0
4701 Rack balance after move: 0.89
4702 Conservative AI plays 'ay' at (9, 4) across for 28 points!
4703
4704 MCTS AI's decision process:
4705 Choosing to play 'var' at (8, 4) (down) for 6 points
4706 Expected net score advantage: -15.5 points
4707 Based on 10 simulated opponent responses
4708 MCTS AI plays 'var' at (8, 4) down for 6 points!
4709
4710 Conservative AI's decision process:
4711 Choosing to play 'yap' at (9, 5) (down) for 8 points
4712 Move evaluation score: 31.2
4713 Rack balance after move: 0.89
4714 Conservative AI plays 'yap' at (9, 5) down for 8 points!
4715
4716 MCTS AI's decision process:
4717 Choosing to play 'lisp' at (11, 2) (across) for 19 points
4718 Expected net score advantage: -5.6 points
4719 Based on 10 simulated opponent responses
4720 MCTS AI plays 'lisp' at (11, 2) across for 19 points!
4721
4722 Conservative AI's decision process:
4723 Choosing to play 'brants' at (10, 3) (across) for 12 points
4724 Move evaluation score: 32.4
4725 Rack balance after move: 0.87
4726 Conservative AI plays 'brants' at (10, 3) across for 12 points!
4727
4728 MCTS AI's decision process:

```
4729 Choosing to play 'in' at (12, 2) (across) for 13
      points
4730 Expected net score advantage: -7.0 points
4731 Based on 10 simulated opponent responses
4732 MCTS AI plays 'in' at (12, 2) across for 13
      points!
4733
4734 Conservative AI's decision process:
4735 Choosing to play 'jo' at (6, 9) (across) for 9
      points
4736 Move evaluation score: 32.4
4737 Rack balance after move: 0.73
4738 Conservative AI plays 'jo' at (6, 9) across for 9
      points!
4739
4740 MCTS AI's decision process:
4741 Choosing to play 'ontic' at (13, 1) (across) for
      35 points
4742 Expected net score advantage: 6.9 points
4743 Based on 10 simulated opponent responses
4744 MCTS AI plays 'ontic' at (13, 1) across for 35
      points!
4745
4746 Conservative AI's decision process:
4747 Choosing to play 'en' at (14, 1) (across) for 8
      points
4748 Move evaluation score: 37.0
4749 Rack balance after move: 0.97
4750 Conservative AI plays 'en' at (14, 1) across for
      8 points!
4751
4752 MCTS AI's decision process:
4753 Choosing to play 'veg' at (4, 11) (down) for 18
      points
4754 Expected net score advantage: -3.5 points
4755 Based on 10 simulated opponent responses
4756 MCTS AI plays 'veg' at (4, 11) down for 18 points
      !
4757
4758 Conservative AI's decision process:
4759 Choosing to play 'eld' at (5, 11) (across) for 8
```

```
4759 points
4760 Move evaluation score: 35.5
4761 Rack balance after move: 0.97
4762 Conservative AI plays 'eld' at (5, 11) across for
    8 points!
4763
4764 MCTS AI's decision process:
4765 Choosing to play 'fen' at (14, 0) (across) for 18
    points
4766 Expected net score advantage: -2.5 points
4767 Based on 10 simulated opponent responses
4768 MCTS AI plays 'fen' at (14, 0) across for 18
    points!
4769
4770 Conservative AI's decision process:
4771 Choosing to play 'molto' at (7, 7) (down) for 8
    points
4772 Move evaluation score: 30.8
4773 Rack balance after move: 0.73
4774 Conservative AI plays 'molto' at (7, 7) down for
    8 points!
4775
4776 MCTS AI's decision process:
4777 Choosing to play 'burped' at (0, 13) (down) for
    22 points
4778 Expected net score advantage: -8.7 points
4779 Based on 10 simulated opponent responses
4780 MCTS AI plays 'burped' at (0, 13) down for 22
    points!
4781
4782 Conservative AI's decision process:
4783 Choosing to play 'bi' at (0, 13) (across) for 12
    points
4784 Move evaluation score: 39.5
4785 Rack balance after move: 0.77
4786 Conservative AI plays 'bi' at (0, 13) across for
    12 points!
4787
4788 MCTS AI's decision process:
4789 Choosing to play 'corker' at (2, 8) (across) for
    30 points
```

4790 Expected net score advantage: 3.4 points
4791 Based on 10 simulated opponent responses
4792 MCTS AI plays 'corker' at (2, 8) across for 30 points!
4793
4794 Conservative AI's decision process:
4795 Choosing to play 'for' at (1, 9) (down) for 14 points
4796 Move evaluation score: 32.0
4797 Rack balance after move: 0.79
4798 Conservative AI plays 'for' at (1, 9) down for 14 points!
4799
4800 MCTS AI's decision process:
4801 Choosing to play 'sat' at (2, 14) (down) for 24 points
4802 Expected net score advantage: 4.5 points
4803 Based on 10 simulated opponent responses
4804 MCTS AI plays 'sat' at (2, 14) down for 24 points!
4805
4806 Conservative AI's decision process:
4807 Choosing to play 'meld' at (5, 10) (across) for 11 points
4808 Move evaluation score: 33.2
4809 Rack balance after move: 0.97
4810 Conservative AI plays 'meld' at (5, 10) across for 11 points!
4811
4812 MCTS AI's decision process:
4813 Choosing to play 'argled' at (4, 4) (across) for 24 points
4814 Expected net score advantage: -1.5 points
4815 Based on 10 simulated opponent responses
4816 MCTS AI plays 'argled' at (4, 4) across for 24 points!
4817
4818 Conservative AI's decision process:
4819 Choosing to play 'ne' at (5, 4) (across) for 10 points
4820 Move evaluation score: 30.4

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4821 Rack balance after move: 0.97
4822 Conservative AI plays 'ne' at (5, 4) across for
    10 points!
4823
4824 MCTS AI's decision process:
4825 Choosing to play 'edh' at (6, 4) (across) for 18
    points
4826 Expected net score advantage: -1.6 points
4827 Based on 10 simulated opponent responses
4828 MCTS AI plays 'edh' at (6, 4) across for 18
    points!
4829
4830 Conservative AI's decision process:
4831 Choosing to play 'tic' at (0, 8) (down) for 10
    points
4832 Move evaluation score: 28.0
4833 Rack balance after move: 0.63
4834 Conservative AI plays 'tic' at (0, 8) down for 10
    points!
4835
4836 MCTS AI's decision process:
4837 Choosing to play 'quoit' at (0, 4) (across) for
    42 points
4838 Expected net score advantage: 19.3 points
4839 Based on 10 simulated opponent responses
4840 MCTS AI plays 'quoit' at (0, 4) across for 42
    points!
4841
4842 Conservative AI's decision process:
4843 Choosing to play 'qua' at (0, 4) (down) for 12
    points
4844 Move evaluation score: 30.0
4845 Rack balance after move: 0.73
4846 Conservative AI plays 'qua' at (0, 4) down for 12
    points!
4847
4848 MCTS AI's decision process:
4849 Choosing to play 'uh' at (0, 5) (down) for 26
    points
4850 Expected net score advantage: 9.7 points
4851 Based on 10 simulated opponent responses
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```
4852 MCTS AI plays 'uh' at (0, 5) down for 26 points!
4853
4854 Conservative AI's decision process:
4855 Choosing to play 'aa' at (3, 6) (across) for 9
    points
4856 Move evaluation score: 28.8
4857 Rack balance after move: 0.63
4858 Conservative AI plays 'aa' at (3, 6) across for 9
    points!
4859
4860 MCTS AI's decision process:
4861 Choosing to play 'ex' at (5, 7) (across) for 21
    points
4862 Expected net score advantage: 1.8 points
4863 Based on 10 simulated opponent responses
4864 MCTS AI plays 'ex' at (5, 7) across for 21 points
    !
4865
4866 Conservative AI's decision process:
4867 Choosing to play 'fens' at (14, 0) (across) for
    16 points
4868 Move evaluation score: 32.0
4869 Rack balance after move: 0.69
4870 Conservative AI plays 'fens' at (14, 0) across
    for 16 points!
4871
4872 MCTS AI's decision process:
4873 Choosing to play 'aw' at (2, 3) (down) for 12
    points
4874 Expected net score advantage: 2.0 points
4875 Based on 10 simulated opponent responses
4876 MCTS AI plays 'aw' at (2, 3) down for 12 points!
4877
4878 Conservative AI's decision process:
4879 Choosing to play 'irk' at (0, 11) (down) for 8
    points
4880 Move evaluation score: 28.4
4881 Rack balance after move: 0.77
4882 Conservative AI plays 'irk' at (0, 11) down for 8
    points!
4883
```

```
4884 MCTS AI's decision process:  
4885 Choosing to play 'ionone' at (5, 0) (across) for  
     8 points  
4886 Expected net score advantage: 1.0 points  
4887 Based on 10 simulated opponent responses  
4888 MCTS AI plays 'ionone' at (5, 0) across for 8  
     points!  
4889  
4890 Conservative AI's decision process:  
4891 Choosing to play 'titi' at (4, 0) (down) for 12  
     points  
4892 Move evaluation score: 21.6  
4893 Rack balance after move: 0.90  
4894 Conservative AI plays 'titi' at (4, 0) down for  
     12 points!  
4895  
4896 MCTS AI's decision process:  
4897 Choosing to play 'nu' at (5, 2) (down) for 3  
     points  
4898 Expected net score advantage: -4.0 points  
4899 Based on 10 simulated opponent responses  
4900 MCTS AI plays 'nu' at (5, 2) down for 3 points!  
4901 Conservative AI plays 'gag' at (2, 6) down for 7  
     points!  
4902 No moves available for MCTS AI. Skipping turn.  
4903 Conservative AI plays 'rede' at (4, 5) down for 5  
     points!  
4904 No moves available for MCTS AI. Skipping turn.  
4905 No moves available for Conservative AI. Skipping  
     turn.  
4906  
4907 Neither player has any available moves. Game  
     ending.  
4908  
4909 --- GAME OVER ---  
4910 Final Board:  
4911 ____quoit__i_bi  
4912 ____uh__if_r_u_  
4913 ___aa_g_corkers  
4914 ___w__aa_r___pa  
4915 t___argled_v_et
```

```
4916 ionone_ex_meld_
4917 t_u_edh__jog___
4918 i____e_mae_____
4919 ___v_yowed_____
4920 ___ay_lez_____
4921 __brants_____
4922 __lisp_o_____
4923 __in_____
4924 _ontic_____
4925 fens_____
4926 Board saved to 'assets/game_output.png'
4927
4928 Final Scores:
4929 Conservative AI: 3392 points
4930 MCTS AI: 4525 points
4931
4932 MCTS AI wins!
4933
4934 Game 4/5
4935 Conservative AI starts the game!
4936 Conservative AI plays 'de' at (7, 7) across for 3
    points!
4937
4938 Conservative AI's decision process:
4939 Choosing to play 'ad' at (6, 7) (across) for 13
    points
4940 Move evaluation score: 30.4
4941 Rack balance after move: 0.73
4942 Conservative AI plays 'ad' at (6, 7) across for
    13 points!
4943
4944 MCTS AI's decision process:
4945 Choosing to play 'grows' at (8, 5) (across) for
    29 points
4946 Expected net score advantage: 4.3 points
4947 Based on 10 simulated opponent responses
4948 MCTS AI plays 'grows' at (8, 5) across for 29
    points!
4949
4950 Conservative AI's decision process:
4951 Choosing to play 'dewan' at (6, 8) (down) for 9
```

```
4951 points
4952 Move evaluation score: 27.0
4953 Rack balance after move: 0.87
4954 Conservative AI plays 'dewan' at (6, 8) down for
    9 points!
4955
4956 MCTS AI's decision process:
4957 Choosing to play 'sail' at (9, 7) (across) for 15
    points
4958 Expected net score advantage: -7.6 points
4959 Based on 10 simulated opponent responses
4960 MCTS AI plays 'sail' at (9, 7) across for 15
    points!
4961
4962 Conservative AI's decision process:
4963 Choosing to play 'lez' at (9, 10) (down) for 24
    points
4964 Move evaluation score: 25.9
4965 Rack balance after move: 0.89
4966 Conservative AI plays 'lez' at (9, 10) down for
    24 points!
4967
4968 MCTS AI's decision process:
4969 Choosing to play 'eth' at (4, 6) (down) for 21
    points
4970 Expected net score advantage: -6.2 points
4971 Based on 10 simulated opponent responses
4972 MCTS AI plays 'eth' at (4, 6) down for 21 points!
4973
4974 Conservative AI's decision process:
4975 Choosing to play 'plyer' at (0, 7) (down) for 35
    points
4976 Move evaluation score: 30.8
4977 Rack balance after move: 0.89
4978 Conservative AI plays 'plyer' at (0, 7) down for
    35 points!
4979
4980 MCTS AI's decision process:
4981 Choosing to play 'zip' at (11, 10) (across) for
    28 points
4982 Expected net score advantage: -2.7 points
```

```
4983 Based on 10 simulated opponent responses
4984 MCTS AI plays 'zip' at (11, 10) across for 28
     points!
4985
4986 Conservative AI's decision process:
4987 Choosing to play 'yew' at (2, 7) (across) for 10
     points
4988 Move evaluation score: 38.8
4989 Rack balance after move: 0.97
4990 Conservative AI plays 'yew' at (2, 7) across for
     10 points!
4991
4992 MCTS AI's decision process:
4993 Choosing to play 'blunter' at (3, 2) (across) for
     27 points
4994 Expected net score advantage: -4.0 points
4995 Based on 10 simulated opponent responses
4996 MCTS AI plays 'blunter' at (3, 2) across for 27
     points!
4997
4998 Conservative AI's decision process:
4999 Choosing to play 'zips' at (11, 10) (across) for
     15 points
5000 Move evaluation score: 32.8
5001 Rack balance after move: 0.73
5002 Conservative AI plays 'zips' at (11, 10) across
     for 15 points!
5003
5004 MCTS AI's decision process:
5005 Choosing to play 'fain' at (12, 11) (across) for
     29 points
5006 Expected net score advantage: 2.3 points
5007 Based on 10 simulated opponent responses
5008 MCTS AI plays 'fain' at (12, 11) across for 29
     points!
5009
5010 Conservative AI's decision process:
5011 Choosing to play 'ba' at (13, 13) (across) for 20
     points
5012 Move evaluation score: 30.8
5013 Rack balance after move: 0.59
```

5014 Conservative AI plays 'ba' at (13, 13) across for 20 points!

5015

5016 MCTS AI's decision process:

5017 Choosing to play 'jeux' at (1, 4) (down) for 36 points

5018 Expected net score advantage: 10.0 points

5019 Based on 10 simulated opponent responses

5020 MCTS AI plays 'jeux' at (1, 4) down for 36 points!

5021

5022 Conservative AI's decision process:

5023 Choosing to play 'jo' at (1, 4) (across) for 11 points

5024 Move evaluation score: 30.0

5025 Rack balance after move: 0.59

5026 Conservative AI plays 'jo' at (1, 4) across for 11 points!

5027

5028 MCTS AI's decision process:

5029 Choosing to play 'loof' at (3, 3) (down) for 16 points

5030 Expected net score advantage: -4.5 points

5031 Based on 10 simulated opponent responses

5032 MCTS AI plays 'loof' at (3, 3) down for 16 points!

5033

5034 Conservative AI's decision process:

5035 Choosing to play 'ae' at (2, 3) (across) for 10 points

5036 Move evaluation score: 30.4

5037 Rack balance after move: 0.73

5038 Conservative AI plays 'ae' at (2, 3) across for 10 points!

5039

5040 MCTS AI's decision process:

5041 Choosing to play 'parotoid' at (0, 7) (across) for 36 points

5042 Expected net score advantage: 10.1 points

5043 Based on 10 simulated opponent responses

5044 MCTS AI plays 'parotoid' at (0, 7) across for 86

```
5044 points!
5045
5046 Conservative AI's decision process:
5047 Choosing to play 'nan' at (12, 14) (down) for 9
    points
5048 Move evaluation score: 30.0
5049 Rack balance after move: 0.87
5050 Conservative AI plays 'nan' at (12, 14) down for
    9 points!
5051
5052 MCTS AI's decision process:
5053 Choosing to play 'reinks' at (11, 3) (across) for
    40 points
5054 Expected net score advantage: 10.0 points
5055 Based on 10 simulated opponent responses
5056 MCTS AI plays 'reinks' at (11, 3) across for 40
    points!
5057
5058 Conservative AI's decision process:
5059 Choosing to play 'hade' at (6, 6) (across) for 8
    points
5060 Move evaluation score: 29.6
5061 Rack balance after move: 0.73
5062 Conservative AI plays 'hade' at (6, 6) across for
    8 points!
5063
5064 MCTS AI's decision process:
5065 Choosing to play 'kore' at (11, 7) (down) for 24
    points
5066 Expected net score advantage: -2.5 points
5067 Based on 10 simulated opponent responses
5068 MCTS AI plays 'kore' at (11, 7) down for 24
    points!
5069
5070 Conservative AI's decision process:
5071 Choosing to play 'ye' at (5, 9) (down) for 13
    points
5072 Move evaluation score: 31.6
5073 Rack balance after move: 0.87
5074 Conservative AI plays 'ye' at (5, 9) down for 13
    points!
```

5075
5076 MCTS AI's decision process:
5077 Choosing to play 'qua' at (3, 10) (down) for 29 points
5078 Expected net score advantage: 1.2 points
5079 Based on 10 simulated opponent responses
5080 MCTS AI plays 'qua' at (3, 10) down for 29 points!
5081
5082 Conservative AI's decision process:
5083 Choosing to play 'luv' at (4, 9) (across) for 12 points
5084 Move evaluation score: 26.4
5085 Rack balance after move: 0.63
5086 Conservative AI plays 'luv' at (4, 9) across for 12 points!
5087
5088 MCTS AI's decision process:
5089 Choosing to play 'eh' at (10, 3) (across) for 22 points
5090 Expected net score advantage: -4.1 points
5091 Based on 10 simulated opponent responses
5092 MCTS AI plays 'eh' at (10, 3) across for 22 points!
5093
5094 Conservative AI's decision process:
5095 Choosing to play 'rim' at (13, 7) (across) for 11 points
5096 Move evaluation score: 35.5
5097 Rack balance after move: 0.63
5098 Conservative AI plays 'rim' at (13, 7) across for 11 points!
5099
5100 MCTS AI's decision process:
5101 Choosing to play 'veg' at (12, 1) (across) for 18 points
5102 Expected net score advantage: -6.3 points
5103 Based on 10 simulated opponent responses
5104 MCTS AI plays 'veg' at (12, 1) across for 18 points!
5105

```
5106 Conservative AI's decision process:  
5107 Choosing to play 'haded' at (6, 6) (across) for  
      24 points  
5108 Move evaluation score: 36.0  
5109 Rack balance after move: 0.77  
5110 Conservative AI plays 'haded' at (6, 6) across  
      for 24 points!  
5111  
5112 MCTS AI's decision process:  
5113 Choosing to play 'amie' at (1, 9) (across) for 24  
      points  
5114 Expected net score advantage: 8.6 points  
5115 Based on 10 simulated opponent responses  
5116 MCTS AI plays 'amie' at (1, 9) across for 24  
      points!  
5117  
5118 Conservative AI's decision process:  
5119 Choosing to play 'etic' at (14, 7) (across) for  
      12 points  
5120 Move evaluation score: 31.5  
5121 Rack balance after move: 0.67  
5122 Conservative AI plays 'etic' at (14, 7) across  
      for 12 points!  
5123  
5124 MCTS AI's decision process:  
5125 Choosing to play 'covin' at (10, 1) (down) for 20  
      points  
5126 Expected net score advantage: 12.0 points  
5127 Based on 10 simulated opponent responses  
5128 MCTS AI plays 'covin' at (10, 1) down for 20  
      points!  
5129  
5130 Conservative AI's decision process:  
5131 Choosing to play 'tuft' at (6, 1) (across) for 8  
      points  
5132 Move evaluation score: 9.3  
5133 Rack balance after move: 0.70  
5134 Conservative AI plays 'tuft' at (6, 1) across for  
      8 points!  
5135  
5136 MCTS AI's decision process:
```

```
5137 Choosing to play 'an' at (14, 0) (across) for 6
      points
5138 Expected net score advantage: 2.0 points
5139 Based on 10 simulated opponent responses
5140 MCTS AI plays 'an' at (14, 0) across for 6 points
!
5141 Conservative AI plays 'ut' at (5, 5) across for 4
      points!
5142
5143 MCTS AI's decision process:
5144 Choosing to play 'grim' at (13, 6) (across) for 7
      points
5145 Expected net score advantage: 7.0 points
5146 Based on 10 simulated opponent responses
5147 MCTS AI plays 'grim' at (13, 6) across for 7
      points!
5148 No moves available for Conservative AI. Skipping
      turn.
5149 No moves available for MCTS AI. Skipping turn.
5150
5151 Neither player has any available moves. Game
      ending.
5152
5153 --- GAME OVER ---
5154 Final Board:
5155 _____parotoid
5156 ____jo_l_amie__
5157 ___ae__yew_____
5158 __blunter_q_____
5159 ___ox_er_luv___
5160 ___o_ut__ya_____
5161 _tuft_haded_____
5162 _____de_____
5163 _____grows_____
5164 _____sail_____
5165 _c_eh___n_e_____
5166 _o_reinks_zips_
5167 _veg___o___fain
5168 _i____grim__ba
5169 an_____etic___n
5170 Board saved to 'assets/game_output.png'
```

5171
5172 Final Scores:
5173 MCTS AI: 5002 points
5174 Conservative AI: 3643 points
5175
5176 MCTS AI wins!
5177
5178 Game 5/5
5179 MCTS AI starts the game!
5180 MCTS AI plays 're' at (7, 7) across for 2 points!
5181
5182 MCTS AI's decision process:
5183 Choosing to play 'vex' at (8, 6) (across) for 44 points
5184 Expected net score advantage: 13.9 points
5185 Based on 10 simulated opponent responses
5186 MCTS AI plays 'vex' at (8, 6) across for 44 points!
5187
5188 Conservative AI's decision process:
5189 Choosing to play 'ah' at (6, 7) (across) for 29 points
5190 Move evaluation score: 35.6
5191 Rack balance after move: 0.63
5192 Conservative AI plays 'ah' at (6, 7) across for 29 points!
5193
5194 MCTS AI's decision process:
5195 Choosing to play 'fa' at (5, 9) (down) for 19 points
5196 Expected net score advantage: -2.2 points
5197 Based on 10 simulated opponent responses
5198 MCTS AI plays 'fa' at (5, 9) down for 19 points!
5199
5200 Conservative AI's decision process:
5201 Choosing to play 'red' at (7, 7) (across) for 11 points
5202 Move evaluation score: 37.5
5203 Rack balance after move: 0.63
5204 Conservative AI plays 'red' at (7, 7) across for 11 points!

5205
5206 MCTS AI's decision process:
5207 Choosing to play 'vexer' at (8, 6) (across) for
23 points
5208 Expected net score advantage: -8.3 points
5209 Based on 10 simulated opponent responses
5210 MCTS AI plays 'vexer' at (8, 6) across for 23
points!
5211
5212 Conservative AI's decision process:
5213 Choosing to play 'redear' at (7, 7) (across) for
10 points
5214 Move evaluation score: 29.8
5215 Rack balance after move: 0.49
5216 Conservative AI plays 'redear' at (7, 7) across
for 10 points!
5217
5218 MCTS AI's decision process:
5219 Choosing to play 'ne' at (6, 11) (across) for 8
points
5220 Expected net score advantage: -15.2 points
5221 Based on 10 simulated opponent responses
5222 MCTS AI plays 'ne' at (6, 11) across for 8 points
!
5223
5224 Conservative AI's decision process:
5225 Choosing to play 'pa' at (5, 12) (across) for 11
points
5226 Move evaluation score: 27.2
5227 Rack balance after move: 0.49
5228 Conservative AI plays 'pa' at (5, 12) across for
11 points!
5229
5230 MCTS AI's decision process:
5231 Choosing to play 'onion' at (4, 14) (down) for 20
points
5232 Expected net score advantage: -7.5 points
5233 Based on 10 simulated opponent responses
5234 MCTS AI plays 'onion' at (4, 14) down for 20
points!
5235

5236 Conservative AI's decision process:
5237 Choosing to play 'kin' at (8, 12) (across) for 27 points
5238 Move evaluation score: 34.8
5239 Rack balance after move: 0.73
5240 Conservative AI plays 'kin' at (8, 12) across for 27 points!
5241
5242 MCTS AI's decision process:
5243 Choosing to play 'sly' at (9, 10) (across) for 23 points
5244 Expected net score advantage: 0.2 points
5245 Based on 10 simulated opponent responses
5246 MCTS AI plays 'sly' at (9, 10) across for 23 points!
5247
5248 Conservative AI's decision process:
5249 Choosing to play 'mo' at (4, 13) (across) for 8 points
5250 Move evaluation score: 25.8
5251 Rack balance after move: 0.73
5252 Conservative AI plays 'mo' at (4, 13) across for 8 points!
5253
5254 MCTS AI's decision process:
5255 Choosing to play 'zoa' at (3, 11) (across) for 29 points
5256 Expected net score advantage: 7.4 points
5257 Based on 10 simulated opponent responses
5258 MCTS AI plays 'zoa' at (3, 11) across for 29 points!
5259
5260 Conservative AI's decision process:
5261 Choosing to play 'wo' at (2, 12) (down) for 10 points
5262 Move evaluation score: 27.0
5263 Rack balance after move: 0.59
5264 Conservative AI plays 'wo' at (2, 12) down for 10 points!
5265
5266 MCTS AI's decision process:

```
5267 Choosing to play 'cloze' at (0, 11) (down) for 24
      points
5268 Expected net score advantage: 1.2 points
5269 Based on 10 simulated opponent responses
5270 MCTS AI plays 'cloze' at (0, 11) down for 24
      points!
5271
5272 Conservative AI's decision process:
5273 Choosing to play 'ciao' at (0, 11) (across) for
      18 points
5274 Move evaluation score: 31.5
5275 Rack balance after move: 0.34
5276 Conservative AI plays 'ciao' at (0, 11) across
      for 18 points!
5277
5278 MCTS AI's decision process:
5279 Choosing to play 'hexads' at (6, 8) (down) for 17
      points
5280 Expected net score advantage: -4.8 points
5281 Based on 10 simulated opponent responses
5282 MCTS AI plays 'hexads' at (6, 8) down for 17
      points!
5283
5284 Conservative AI's decision process:
5285 Choosing to play 'ye' at (1, 13) (across) for 22
      points
5286 Move evaluation score: 32.8
5287 Rack balance after move: 0.97
5288 Conservative AI plays 'ye' at (1, 13) across for
      22 points!
5289
5290 MCTS AI's decision process:
5291 Choosing to play 'ulva' at (11, 7) (down) for 27
      points
5292 Expected net score advantage: 1.5 points
5293 Based on 10 simulated opponent responses
5294 MCTS AI plays 'ulva' at (11, 7) down for 27
      points!
5295
5296 Conservative AI's decision process:
5297 Choosing to play 'vend' at (13, 7) (across) for
```

```
5297 10 points
5298 Move evaluation score: 30.5
5299 Rack balance after move: 0.97
5300 Conservative AI plays 'vend' at (13, 7) across
    for 10 points!
5301
5302 MCTS AI's decision process:
5303 Choosing to play 'oleic' at (14, 10) (across) for
    27 points
5304 Expected net score advantage: 2.7 points
5305 Based on 10 simulated opponent responses
5306 MCTS AI plays 'oleic' at (14, 10) across for 27
    points!
5307
5308 Conservative AI's decision process:
5309 Choosing to play 'venders' at (13, 7) (across)
    for 30 points
5310 Move evaluation score: 39.8
5311 Rack balance after move: 0.97
5312 Conservative AI plays 'venders' at (13, 7) across
    for 30 points!
5313
5314 MCTS AI's decision process:
5315 Choosing to play 'age' at (12, 10) (across) for
    22 points
5316 Expected net score advantage: 0.2 points
5317 Based on 10 simulated opponent responses
5318 MCTS AI plays 'age' at (12, 10) across for 22
    points!
5319
5320 Conservative AI's decision process:
5321 Choosing to play 'dit' at (10, 8) (across) for 16
    points
5322 Move evaluation score: 31.3
5323 Rack balance after move: 0.89
5324 Conservative AI plays 'dit' at (10, 8) across for
    16 points!
5325
5326 MCTS AI's decision process:
5327 Choosing to play 'sit' at (11, 12) (across) for 8
    points
```

```
5328 Expected net score advantage: -12.4 points
5329 Based on 10 simulated opponent responses
5330 MCTS AI plays 'sit' at (11, 12) across for 8
      points!
5331
5332 Conservative AI's decision process:
5333 Choosing to play 'fad' at (14, 6) (across) for 10
      points
5334 Move evaluation score: 23.8
5335 Rack balance after move: 0.74
5336 Conservative AI plays 'fad' at (14, 6) across for
      10 points!
5337
5338 MCTS AI's decision process:
5339 Choosing to play 'trim' at (5, 4) (across) for 14
      points
5340 Expected net score advantage: -5.9 points
5341 Based on 10 simulated opponent responses
5342 MCTS AI plays 'trim' at (5, 4) across for 14
      points!
5343
5344 Conservative AI's decision process:
5345 Choosing to play 'op' at (4, 5) (across) for 10
      points
5346 Move evaluation score: 22.6
5347 Rack balance after move: 0.79
5348 Conservative AI plays 'op' at (4, 5) across for
      10 points!
5349
5350 MCTS AI's decision process:
5351 Choosing to play 'tun' at (3, 3) (across) for 9
      points
5352 Expected net score advantage: -5.1 points
5353 Based on 10 simulated opponent responses
5354 MCTS AI plays 'tun' at (3, 3) across for 9 points
      !
5355
5356 Conservative AI's decision process:
5357 Choosing to play 'we' at (4, 10) (across) for 10
      points
5358 Move evaluation score: 20.8
```

```
5359 Rack balance after move: 0.89
5360 Conservative AI plays 'we' at (4, 10) across for
    10 points!
5361
5362 MCTS AI's decision process:
5363 Choosing to play 'butte' at (2, 4) (down) for 24
    points
5364 Expected net score advantage: 3.0 points
5365 Based on 10 simulated opponent responses
5366 MCTS AI plays 'butte' at (2, 4) down for 24
    points!
5367
5368 Conservative AI's decision process:
5369 Choosing to play 'butter' at (2, 4) (down) for 8
    points
5370 Move evaluation score: 25.2
5371 Rack balance after move: 0.89
5372 Conservative AI plays 'butter' at (2, 4) down for
    8 points!
5373
5374 MCTS AI's decision process:
5375 Choosing to play 'buttering' at (2, 4) (down) for
    24 points
5376 Expected net score advantage: 0.0 points
5377 Based on 10 simulated opponent responses
5378 MCTS AI plays 'buttering' at (2, 4) down for 24
    points!
5379
5380 Conservative AI's decision process:
5381 Choosing to play 'tub' at (2, 2) (across) for 12
    points
5382 Move evaluation score: 15.8
5383 Rack balance after move: 0.93
5384 Conservative AI plays 'tub' at (2, 2) across for
    12 points!
5385
5386 MCTS AI's decision process:
5387 Choosing to play 'buhl' at (12, 4) (across) for
    13 points
5388 Expected net score advantage: -5.0 points
5389 Based on 10 simulated opponent responses
```

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5390 MCTS AI plays 'buhl' at (12, 4) across for 13
      points!
5391
5392 Conservative AI's decision process:
5393 Choosing to play 'jut' at (1, 3) (down) for 10
      points
5394 Move evaluation score: 10.3
5395 Rack balance after move: 0.85
5396 Conservative AI plays 'jut' at (1, 3) down for 10
      points!
5397
5398 MCTS AI's decision process:
5399 Choosing to play 'in' at (9, 3) (across) for 2
      points
5400 Expected net score advantage: -5.0 points
5401 Based on 10 simulated opponent responses
5402 MCTS AI plays 'in' at (9, 3) across for 2 points!
5403 Conservative AI plays 'go' at (13, 3) across for
      7 points!
5404 No moves available for MCTS AI. Skipping turn.
5405 No moves available for Conservative AI. Skipping
      turn.
5406
5407 Neither player has any available moves. Game
      ending.
5408
5409 --- GAME OVER ---
5410 Final Board:
5411 _____ciao
5412 __j_____l_ye
5413 __tub_____ow__
5414 __tun_____zoa_
5415 ___top__we_mo
5416 ___trim_f__pan
5417 ___e__aha_ne_i
5418 ___r__redear_o
5419 ___i_vexer_kin
5420 ___in__a_sly__
5421 ___g__dit___
5422 _____us__sit
5423 ___buhl__age__
```

```
5424 ___go__venders_
5425 _____fad_oleic
5426 Board saved to 'assets/game_output.png'
5427
5428 Final Scores:
5429 Conservative AI: 3912 points
5430 MCTS AI: 5381 points
5431
5432 MCTS AI wins!
5433
5434 === Tournament Results ===
5435
5436 Player Statistics:
5437 -----
5438
5439 Greedy AI:
5440 Wins: 15
5441 Losses: 0
5442 Draws: 0
5443 Average Score: 2904.87
5444 Score Std Dev: 1692.26
5445
5446 Adversarial AI:
5447 Wins: 5
5448 Losses: 10
5449 Draws: 0
5450 Average Score: 2124.87
5451 Score Std Dev: 1220.78
5452
5453 MCTS AI:
5454 Wins: 10
5455 Losses: 5
5456 Draws: 0
5457 Average Score: 2681.00
5458 Score Std Dev: 1612.12
5459
5460 Conservative AI:
5461 Wins: 0
5462 Losses: 15
5463 Draws: 0
5464 Average Score: 2114.00
```

```
5465 Score Std Dev: 1150.82
5466
5467 Head-to-head Results:
5468 -----
5469
5470 Greedy AI vs Adversarial AI:
5471 Record: 5-0-0
5472 Average Scores: Greedy AI: 1063.20, Adversarial
AI: 791.40
5473
5474 Greedy AI vs MCTS AI:
5475 Record: 5-0-0
5476 Average Scores: Greedy AI: 2817.00, MCTS AI: 948.
40
5477
5478 Greedy AI vs Conservative AI:
5479 Record: 5-0-0
5480 Average Scores: Greedy AI: 4834.40, Conservative
AI: 822.20
5481
5482 Adversarial AI vs MCTS AI:
5483 Record: 0-5-0
5484 Average Scores: Adversarial AI: 2076.60, MCTS AI
: 2558.00
5485
5486 Adversarial AI vs Conservative AI:
5487 Record: 5-0-0
5488 Average Scores: Adversarial AI: 3506.60,
Conservative AI: 2120.80
5489
5490 MCTS AI vs Conservative AI:
5491 Record: 5-0-0
5492 Average Scores: MCTS AI: 4536.60, Conservative AI
: 3399.00
5493
5494 Process finished with exit code 0
5495
```