

## Robo-cooking → Arduino based cooking instructions

- 1) Define cooking actions as set of arduino commands in code
- 2) have circuit designed to operate with certain buttons

eg. cut → signals arduino to cut  
slice (rotated cutting) →  
gather → corresponding  
spices → functionality

Extension → making recipes which call a bunch of actions in a package

Extension → publicly available software to write and store recipes

## Modifications:

- can use computer vision and maybe electronic glove to sense different actions and call actions

## Vision Lite → computer vision program which mimics existing functionality of metaverse and 3D editors like Blender

- 1) Use CV to define instructions

↓  
look for motion and position of sensors

"Zoom"

↳ zoom in at current camera angle

Tech: arduino sensor glove

Blender script for zooming in

Access to script writing

\* Local Blender File or scene Lidar

, "Pinch"

zoom out

, "Drag"

, "Rotate"

- 2) create website with 3D scans and models to edit this way

Memory Management Extension for VScode?

## Air quality Monitoring around campus

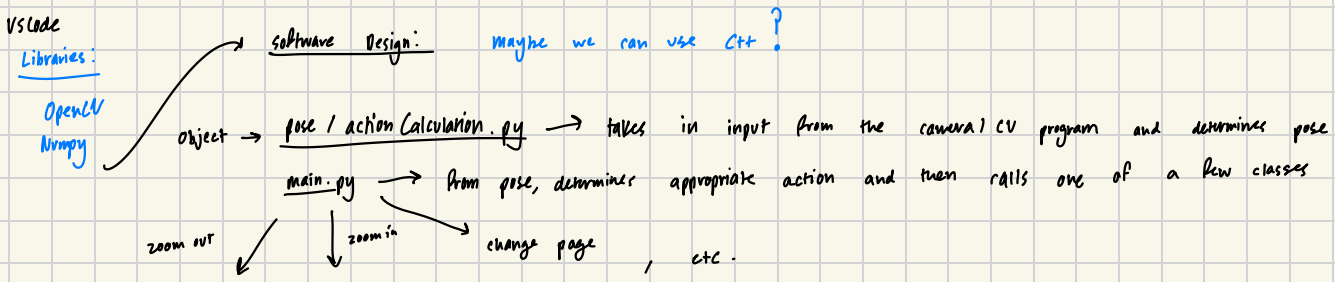
↳ software side: create an app similar to weather app which houses information about different air qualities

↳ Hardware, I2C with sensors and arduino style connection

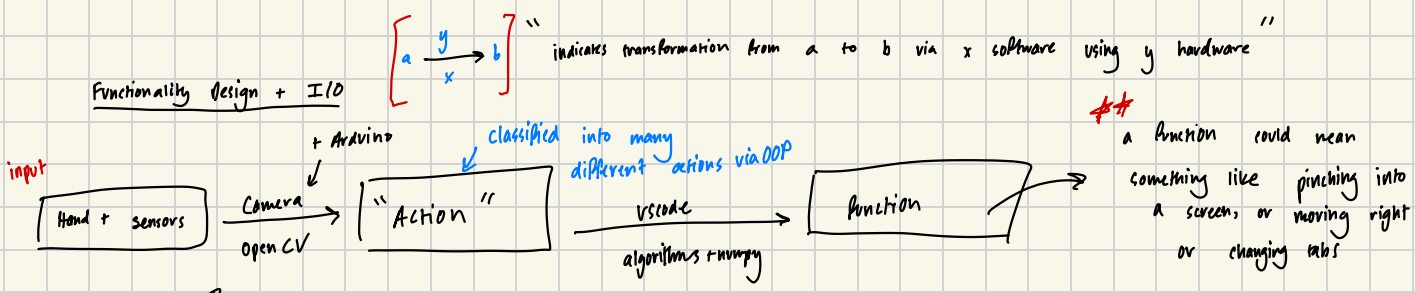
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Bonus: build circuits from scratch

Overall System Design:

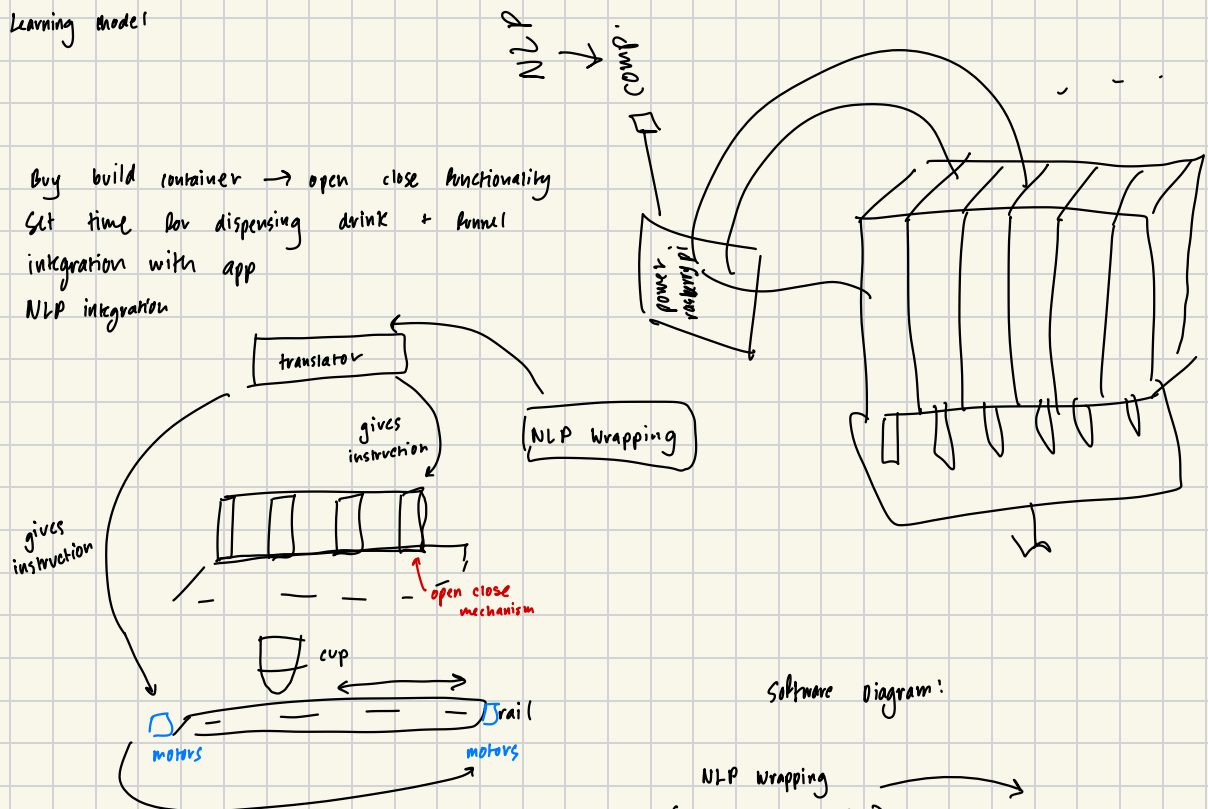
Software	Hardware	Misc:
Blender (or appropriate 3D editor) Blender Python and Blender Python console	Computer Camera Sensors	Gloves



Large Scope:



- Level 1: Buy build container → open close functionality
- Level 2: Set time for dispensing drink + funnel
- Level 3: integration with app
- Level 4: NLP integration

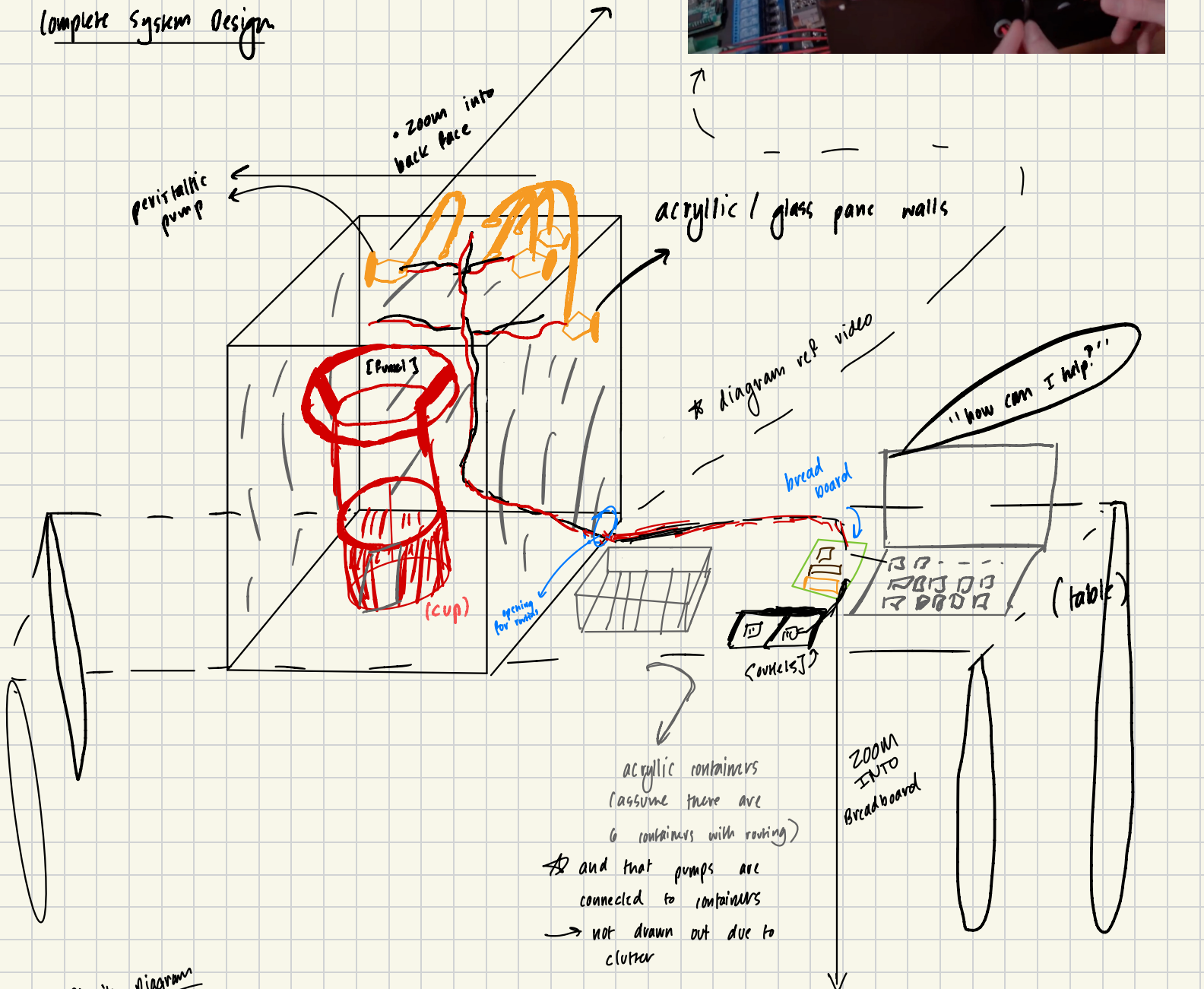
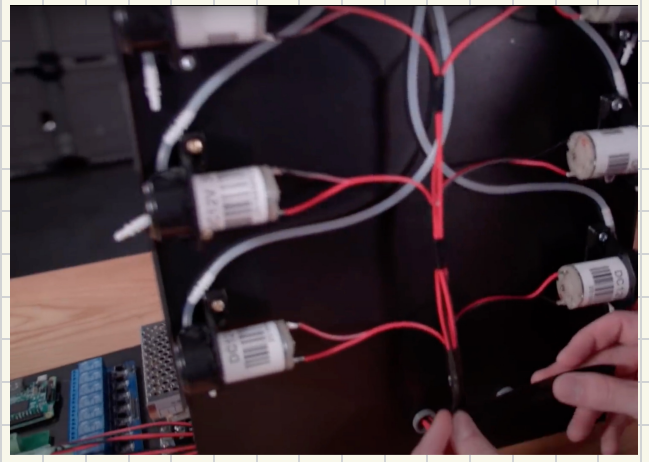


## Software Diagram

gpt API run through  
RBP → translate into  
python scripts and dispensing  
array.

→ reference video

## Complete System Design



## Circuit Diagram

Raspberry Pi Pin Out

Raspberry Pi 3 Model B (28 Header)				
GPIO	NAME	FUNCTION	NAME	
1	5V	5.0 VDC Power	17	5V
2	GPIO 0	GPIO 0	18	5V
3	GPIO 1	GPIO 1	19	5V
4	GPIO 2	GPIO 2	20	5V
5	GPIO 3	GPIO 3	21	5V
6	GPIO 4	GPIO 4	22	5V
7	GPIO 5	GPIO 5	23	5V
8	GPIO 6	GPIO 6	24	5V
9	GPIO 7	GPIO 7	25	5V
10	GPIO 8	GPIO 8	26	5V
11	GPIO 9	GPIO 9	27	5V
12	GPIO 10	GPIO 10	28	5V
13	GPIO 11	GPIO 11	29	5V
14	GPIO 12	GPIO 12	30	5V
15	GPIO 13	GPIO 13	31	5V
16	GPIO 14	GPIO 14	32	5V
17	GPIO 15	GPIO 15	33	5V
18	GPIO 16	GPIO 16	34	5V
19	GPIO 17	GPIO 17	35	5V
20	GPIO 18	GPIO 18	36	5V
21	GPIO 19	GPIO 19	37	5V
22	GPIO 20	GPIO 20	38	5V
23	GPIO 21	GPIO 21	39	5V
24	GPIO 22	GPIO 22	40	5V
25	GPIO 23	GPIO 23	41	5V
26	GPIO 24	GPIO 24	42	5V
27	GPIO 25	GPIO 25	43	5V
28	GPIO 26	GPIO 26	44	5V
29	GPIO 27	GPIO 27	45	5V
30	GPIO 28	GPIO 28	46	5V
31	GPIO 29	GPIO 29	47	5V
32	GPIO 30	GPIO 30	48	5V
33	GPIO 31	GPIO 31	49	5V
34	GPIO 32	GPIO 32	50	5V
35	GPIO 33	GPIO 33	51	5V
36	GPIO 34	GPIO 34	52	5V
37	GPIO 35	GPIO 35	53	5V
38	GPIO 36	GPIO 36	54	5V
39	GPIO 37	GPIO 37	55	5V
40	GPIO 38	GPIO 38	56	5V
41	GPIO 39	GPIO 39	57	5V
42	GPIO 40	GPIO 40	58	5V
43	GPIO 41	GPIO 41	59	5V
44	GPIO 42	GPIO 42	60	5V
45	GPIO 43	GPIO 43	61	5V
46	GPIO 44	GPIO 44	62	5V
47	GPIO 45	GPIO 45	63	5V
48	GPIO 46	GPIO 46	64	5V
49	GPIO 47	GPIO 47	65	5V
50	GPIO 48	GPIO 48	66	5V
51	GPIO 49	GPIO 49	67	5V
52	GPIO 50	GPIO 50	68	5V
53	GPIO 51	GPIO 51	69	5V
54	GPIO 52	GPIO 52	70	5V
55	GPIO 53	GPIO 53	71	5V
56	GPIO 54	GPIO 54	72	5V
57	GPIO 55	GPIO 55	73	5V
58	GPIO 56	GPIO 56	74	5V
59	GPIO 57	GPIO 57	75	5V
60	GPIO 58	GPIO 58	76	5V
61	GPIO 59	GPIO 59	77	5V
62	GPIO 60	GPIO 60	78	5V
63	GPIO 61	GPIO 61	79	5V
64	GPIO 62	GPIO 62	80	5V
65	GPIO 63	GPIO 63	81	5V
66	GPIO 64	GPIO 64	82	5V
67	GPIO 65	GPIO 65	83	5V
68	GPIO 66	GPIO 66	84	5V
69	GPIO 67	GPIO 67	85	5V
70	GPIO 68	GPIO 68	86	5V
71	GPIO 69	GPIO 69	87	5V
72	GPIO 70	GPIO 70	88	5V
73	GPIO 71	GPIO 71	89	5V
74	GPIO 72	GPIO 72	90	5V
75	GPIO 73	GPIO 73	91	5V
76	GPIO 74	GPIO 74	92	5V
77	GPIO 75	GPIO 75	93	5V
78	GPIO 76	GPIO 76	94	5V
79	GPIO 77	GPIO 77	95	5V
80	GPIO 78	GPIO 78	96	5V
81	GPIO 79	GPIO 79	97	5V
82	GPIO 80	GPIO 80	98	5V
83	GPIO 81	GPIO 81	99	5V
84	GPIO 82	GPIO 82	100	5V
85	GPIO 83	GPIO 83	101	5V
86	GPIO 84	GPIO 84	102	5V
87	GPIO 85	GPIO 85	103	5V
88	GPIO 86	GPIO 86	104	5V
89	GPIO 87	GPIO 87	105	5V
90	GPIO 88	GPIO 88	106	5V
91	GPIO 89	GPIO 89	107	5V
92	GPIO 90	GPIO 90	108	5V
93	GPIO 91	GPIO 91	109	5V
94	GPIO 92	GPIO 92	110	5V
95	GPIO 93	GPIO 93	111	5V
96	GPIO 94	GPIO 94	112	5V
97	GPIO 95	GPIO 95	113	5V
98	GPIO 96	GPIO 96	114	5V
99	GPIO 97	GPIO 97	115	5V
100	GPIO 98	GPIO 98	116	5V
101	GPIO 99	GPIO 99	117	5V
102	GPIO 100	GPIO 100	118	5V
103	GPIO 101	GPIO 101	119	5V
104	GPIO 102	GPIO 102	120	5V
105	GPIO 103	GPIO 103	121	5V
106	GPIO 104	GPIO 104	122	5V
107	GPIO 105	GPIO 105	123	5V
108	GPIO 106	GPIO 106	124	5V
109	GPIO 107	GPIO 107	125	5V
110	GPIO 108	GPIO 108	126	5V
111	GPIO 109	GPIO 109	127	5V
112	GPIO 110	GPIO 110	128	5V
113	GPIO 111	GPIO 111	129	5V
114	GPIO 112	GPIO 112	130	5V
115	GPIO 113	GPIO 113	131	5V
116	GPIO 114	GPIO 114	132	5V
117	GPIO 115	GPIO 115	133	5V
118	GPIO 116	GPIO 116	134	5V
119	GPIO 117	GPIO 117	135	5V
120	GPIO 118	GPIO 118	136	5V
121	GPIO 119	GPIO 119	137	5V
122	GPIO 120	GPIO 120	138	5V
123	GPIO 121	GPIO 121	139	5V
124	GPIO 122	GPIO 122	140	5V
125	GPIO 123	GPIO 123	141	5V
126	GPIO 124	GPIO 124	142	5V
127	GPIO 125	GPIO 125	143	5V
128	GPIO 126	GPIO 126	144	5V
129	GPIO 127	GPIO 127	145	5V
130	GPIO 128	GPIO 128	146	5V
131	GPIO 129	GPIO 129	147	5V
132	GPIO 130	GPIO 130	148	5V
133	GPIO 131	GPIO 131	149	5V
134	GPIO 132	GPIO 132	150	5V
135	GPIO 133	GPIO 133	151	5V
136	GPIO 134	GPIO 134	152	5V
137	GPIO 135	GPIO 135	153	5V
138	GPIO 136	GPIO 136	154	5V
139	GPIO 137	GPIO 137	155	5V
140	GPIO 138	GPIO 138	156	5V
141	GPIO 139	GPIO 139	157	5V
142	GPIO 140	GPIO 140	158	5V
143	GPIO 141	GPIO 141	159	5V
144	GPIO 142	GPIO 142	160	5V
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146	GPIO 144	GPIO 144	162	5V
147	GPIO 145	GPIO 145	163	5V
148	GPIO 146	GPIO 146	164	5V
149	GPIO 147	GPIO 147	165	5V
150	GPIO 148	GPIO 148	166	5V
151	GPIO 149	GPIO 149	167	5V
152	GPIO 150	GPIO 150	168	5V
153	GPIO 151	GPIO 151	169	5V
154	GPIO 152	GPIO 152	170	5V
155	GPIO 153	GPIO 153	171	5V
156	GPIO 154	GPIO 154	172	5V
157	GPIO 155	GPIO 155	173	5V
158	GPIO 156	GPIO 156	174	5V
159	GPIO 157	GPIO 157	175	5V
160	GPIO 158	GPIO 158	176	5V
161	GPIO 159	GPIO 159	177	5V
162	GPIO 160	GPIO 160	178	5V
163	GPIO 161	GPIO 161	179	5V
164	GPIO 162	GPIO 162	180	5V
165	GPIO 163	GPIO 163	181	5V
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167	GPIO 165	GPIO 165	183	5V
168	GPIO 166	GPIO 166	184	5V
169	GPIO 167	GPIO 167	185	5V
170	GPIO 168	GPIO 168	186	5V
171	GPIO 169	GPIO 169	187	5V
172	GPIO 170	GPIO 170	188	5V
173	GPIO 171	GPIO 171	189	5V
174	GPIO 172	GPIO 172	190	5V
175	GPIO 173	GPIO 173	191	5V
176	GPIO 174	GPIO 174	192	5V
177	GPIO 175	GPIO 175	193	5V
178	GPIO 176	GPIO 176	194	5V
179	GPIO 177	GPIO 177	195	5V
180	GPIO 178	GPIO 178	196	5V
181	GPIO 179	GPIO 179	197	5V
182	GPIO 180	GPIO 180	198	5V
183	GPIO 181	GPIO 181	199	5V
184	GPIO 182	GPIO 182	200	5V
185	GPIO 183	GPIO 183	201	5V
186	GPIO 184	GPIO 184	202	5V
187	GPIO 185	GPIO 185	203	5V
188	GPIO 186	GPIO 186	204	5V
189	GPIO 187	GPIO 187	205	5V
190	GPIO 188	GPIO 188	206	5V
191	GPIO 189	GPIO 189	207	5V
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193	GPIO 191	GPIO 191	209	5V
194	GPIO 192	GPIO 192	210	5V
195	GPIO 193	GPIO 193	211	5V
196	GPIO 194	GPIO 194	212	5V
197	GPIO 195	GPIO 195	213	5V
198	GPIO 196	GPIO 196	214	5V
199	GPIO 197	GPIO 197	215	5V
200	GPIO 198	GPIO 198	216	5V
201	GPIO 199	GPIO 199	217	5V
202	GPIO 200	GPIO 200	218	5V
203	GPIO 201	GPIO 201	219	5V
204	GPIO 202	GPIO 202	220	5V
205	GPIO 203	GPIO 203	221	5V
206	GPIO 204	GPIO 204	222	5V
207	GPIO 205	GPIO 205	223	5V
208	GPIO 206	GPIO 206	224	5V
209	GPIO 207	GPIO 207	225	5V
210	GPIO 208	GPIO 208	226	5V
211	GPIO 209	GPIO 209	227	5V
212	GPIO 210	GPIO 210	228	5V
213	GPIO 211	GPIO 211	229	5V
214	GPIO 212	GPIO 212	230	5V
215	GPIO 213	GPIO 213	231	5V
216	GPIO 214	GPIO 214	232	5V
217	GPIO 215	GPIO 215	233	5V
218	GPIO 216	GPIO 216	234	5V
219	GPIO 217	GPIO 217	235	5V
220	GPIO 218	GPIO 218	236	5V
221	GPIO 219	GPIO 219	237	5V
222	GPIO 220	GPIO 220	238	5V
223	GPIO 221	GPIO 221	239	5V
224	GPIO 222	GPIO 222	240	5V
225	GPIO 223	GPIO 223	241	5V
226	GPIO 224	GPIO 224	242	5V
227	GPIO 225	GPIO 225	243	5V
228	GPIO 226	GPIO 226	244	5V
229	GPIO 227	GPIO 227	245	5V
230	GPIO 228	GPIO 228	246	5V
231	GPIO 229	GPIO 229	247	5V
232	GPIO 230	GPIO 230	248	5V
233	GPIO 231	GPIO 231	249	5V
234	GPIO 232	GPIO 232	250	5V
235	GPIO 233	GPIO 233	251	5V
236	GPIO 234	GPIO 234	252	5V
237	GPIO 235	GPIO 235	253	5V
238	GPIO 236	GPIO 236	254	5V
239	GPIO 237	GPIO 237	255	5V
240	GPIO 238	GPIO 238	256	5V
241	GPIO 239	GPIO 239	257	5V
242	GPIO 240	GPIO 240	258	5V
243	GPIO 241	GPIO 241	259	5V
244	GPIO 242	GPIO 242	260	5V
245	GPIO 243	GPIO 243	261	5V
246	GPIO 244	GPIO 244	262	5V
247	GPIO 245	GPIO 245	263	5V
248	GPIO 246	GPIO 246	264	5V
249	GPIO 247	GPIO 247	265	5V
250	GPIO 248	GPIO 248	266	5V
251	GPIO 249	GPIO 249	267	5V
252	GPIO 250	GPIO 250	268	5V
253	GPIO 251	GPIO 251	269	5V
254	GPIO 252	GPIO 252	270	5V
255	GPIO 253	GPIO 253	271	5V
256	GPIO 254	GPIO 254	272	5V
257	GPIO 255	GPIO 255	273	5V
258	GPIO 256	GPIO 256	274	5V
259	GPIO 257	GPIO 257	275	5V
260	GPIO 258	GPIO 258	276	5V
261	GPIO 259	GPIO 259	277	5V
262	GPIO 260	GPIO 260	278	5V
263	GPIO 261	GPIO 261	279	5V
264	GPIO 262	GPIO 262	280	5V
265	GPIO 263	GPIO 263	281	5V
266	GPIO 264	GPIO 264	282	5V
267	GPIO 265	GPIO 265	283	5V
268	GPIO 266	GPIO 266	284	5V
269	GPIO 267	GPIO 267	285	5V
270	GPIO 268	GPIO 268	286	5V
271	GPIO 269	GPIO 269	287	5V
272				

## Software

### Design and Descriptions

① openAI-methods.py

initializes token and computes response

## Architecture