

Nano Name Generator - NNG

Overview:

NNG is a generative AI project that learns the statistical probabilities of next character given the first character.

NNG learns statistical probabilities from a input files with child names.

NNG uses multinomial sampling to generate first letter of new name and generates next characters based on probability it learnt from input child names

Input = Text file with child names

Output = Generated names through bigram prediction

Output = Loss function or Maximum likelihood estimation

Number of names in the input file = 32033

First 5 names in the input file ['emma', 'olivia', 'ava', 'isabella', 'sophia']

| .0 | a | b | c | d | e | f | g | h | i | j | k | l | m | n | o | p | q | r | s | t | u | v | w | x | y | z |
|--------|--------|-------|-------|--------|--------|-------|-------|--------|--------|-------|-------|--------|--------|--------|-------|------|------|--------|--------|-------|-------|-------|-------|-------|--------|-------|
| | 1306 | 1542 | 1690 | 1531 | | 417 | 669 | 874 | 591 | 2422 | 2963 | 1572 | 2538 | 1146 | 394 | 515 | 92 | 1639 | 2055 | 1308 | 78 | 376 | 307 | 134 | 535 | 929 |
| a.6640 | aa556 | ab541 | ac470 | ad1042 | ae692 | af134 | ag168 | ah2332 | ai1650 | aj175 | ak568 | al2528 | am1634 | an5438 | ao63 | ap82 | aq60 | ar3264 | as1118 | at687 | au381 | av834 | aw161 | ax182 | ay2050 | az435 |
| b.114 | ba321 | bb38 | bc1 | bd65 | be655 | bf0 | bg0 | bh41 | bi217 | bj1 | bk0 | bl103 | bm0 | bn4 | bo105 | bp0 | bq0 | br842 | bs8 | bt2 | bu45 | bv0 | bw0 | bx0 | by83 | bz0 |
| c.97 | ca815 | cb0 | cc42 | cd1 | ce551 | cf0 | cg2 | ch664 | ci271 | cj3 | ck316 | cl116 | cm0 | cn0 | co380 | cp1 | cq11 | cr76 | cs5 | ct35 | cu35 | cv0 | cw0 | cx3 | cy104 | cz4 |
| d.516 | da1303 | db1 | dc3 | dd149 | de1283 | df5 | dg25 | dh118 | di674 | dj9 | dk3 | dl60 | dm30 | dn31 | do378 | dp0 | dq1 | dr424 | ds29 | dt4 | du92 | dv17 | dw23 | dx0 | dy317 | dz1 |
| e.3983 | ea679 | eb121 | ec153 | ed384 | ee1271 | ef82 | eg125 | eh152 | ei818 | ej55 | ek178 | el3248 | em769 | en2675 | eo269 | ep83 | eq14 | er1958 | es861 | et580 | eu69 | ev463 | ew50 | ex132 | ey1070 | ez181 |
| f.80 | fa242 | fb0 | fc0 | fd0 | fe123 | ff44 | fg1 | fh1 | fi160 | fj0 | fk2 | fl20 | fm0 | fn4 | fo60 | fp0 | fq0 | fr114 | fs6 | ft18 | fu10 | fv0 | fw4 | fx0 | fy14 | fz2 |
| g.108 | ga330 | gb3 | gc0 | gd19 | ge334 | gf1 | gg25 | gh360 | gi190 | gj3 | gk0 | gl32 | gm6 | gn27 | go83 | gp0 | gq0 | gr201 | gs30 | gt31 | gu85 | gv1 | gw26 | gx0 | gy31 | gz1 |
| h.2409 | ha2244 | hb8 | hc2 | hd24 | he674 | hf2 | hg2 | hh1 | hi729 | hj9 | hk29 | hl185 | hm117 | hn138 | ho287 | hp1 | hq1 | hr204 | hs31 | ht71 | hu166 | hv39 | hw10 | hx0 | hy213 | hz20 |
| i.2489 | ia2445 | ib110 | ic509 | id440 | ie1653 | if101 | ig428 | ih95 | ii82 | ij76 | ik445 | il1345 | im427 | in2126 | io588 | ip53 | iq52 | ir849 | is1316 | it541 | iu109 | iv269 | iw8 | ix89 | iy779 | iz277 |
| j.71 | ja1473 | jb1 | jc4 | jd4 | je440 | jf0 | ig0 | jh45 | ji119 | jj2 | jk2 | jl9 | jm5 | jn2 | jo479 | jp1 | jq0 | jr11 | js7 | jt2 | ju202 | jv5 | jw6 | jx0 | iy10 | jz0 |
| k.363 | ka1731 | kb2 | kc2 | kd2 | ke895 | kf1 | kg0 | kh307 | ki509 | kj2 | kk20 | kl139 | km9 | kn26 | ko344 | kp0 | kq0 | kr109 | ks95 | kt17 | ku50 | kv2 | kw34 | kx0 | ky379 | kz2 |
| l.1314 | la2623 | lb52 | lc25 | ld138 | le2921 | lf22 | lg6 | lh19 | li2480 | lj6 | lk24 | ll1345 | lm60 | ln14 | lo692 | lp15 | lq3 | lr18 | ls94 | lt77 | lu324 | lv72 | lw16 | lx0 | ly1588 | lz10 |
| m.516 | ma2590 | mb112 | mc51 | md24 | me818 | mf1 | mg0 | mh5 | mi1256 | mj7 | mk1 | ml5 | mm168 | mn20 | mo452 | mp38 | mq0 | mr97 | ms35 | mt4 | mu139 | mv3 | nw2 | mx0 | my287 | mz11 |
| n.6763 | na2977 | nb8 | nc213 | nd704 | ne1359 | nf11 | ng273 | nh26 | ni1725 | nj44 | nk58 | nl195 | nm19 | nn1906 | no496 | np5 | nq2 | nr44 | ns278 | nt443 | nu96 | nv55 | nw11 | nx6 | ny465 | nz145 |
| o.855 | oa149 | ob140 | oc114 | od190 | oe132 | of34 | og44 | oh171 | oi69 | oj16 | ok68 | ol619 | om261 | on2411 | oo115 | op95 | oq3 | or1059 | os504 | ot118 | ou275 | ov176 | ow114 | ox45 | oy103 | oz54 |
| p.33 | pa209 | pb2 | pc1 | pd0 | pe197 | pf1 | pg0 | ph204 | pi61 | pj1 | pk1 | pl16 | pm1 | pn1 | po59 | pp39 | pq0 | pr151 | ps16 | pt17 | pu4 | pq0 | pw0 | px0 | py12 | pz0 |
| q.28 | qa13 | qb0 | qc0 | qd0 | qe1 | qf0 | qg0 | qh0 | qi13 | qj0 | qk0 | ql1 | qm2 | qn0 | qo2 | qp0 | qq0 | qr1 | qs2 | qt0 | qu206 | qv0 | qw3 | qx0 | qy0 | qz0 |
| r.1377 | ra2356 | rb41 | rc99 | rd187 | re1697 | rf9 | rg76 | rh121 | ri3033 | rj25 | rk90 | rl413 | rm162 | rn140 | ro869 | rp14 | rq16 | rr425 | rs190 | rt208 | ru252 | rv80 | rw21 | rx3 | ry773 | rz23 |
| s.1169 | sa1201 | sb21 | sc60 | sd9 | se884 | sf2 | sg2 | sh1285 | si684 | sj2 | sk82 | sl279 | sm90 | sn24 | so531 | sp51 | sq1 | sr55 | ss461 | st765 | su185 | sv14 | sw24 | sx0 | sy215 | sz10 |
| t.483 | ta1027 | tb1 | tc17 | td0 | te716 | tf2 | tg2 | th647 | ti532 | tj3 | tk0 | tl134 | tm4 | tn22 | to667 | tp0 | tq0 | tr352 | ts35 | tt374 | tu78 | tv15 | tw11 | tx2 | ty341 | tz105 |
| u.155 | ua163 | ub103 | uc103 | ud136 | ue169 | uf19 | ug47 | uh58 | ui121 | uj14 | uk93 | ul301 | um154 | un275 | uo10 | up16 | uq10 | ur414 | us474 | ut82 | uu3 | uv37 | uw86 | ux34 | uy13 | uz45 |
| v.88 | va642 | vb1 | vc0 | vd1 | ve568 | vf0 | vg0 | vh1 | vi911 | vj0 | vk3 | vl4 | vm0 | vn8 | vo153 | vp0 | vq0 | vr48 | vs0 | vt0 | vu7 | vv7 | vw0 | vx0 | vy121 | vz0 |
| w.51 | wa280 | wb1 | wc0 | wd8 | we149 | wf2 | wg1 | wh23 | wi148 | wj0 | wk6 | wl13 | wm2 | wn58 | wo36 | wp0 | wq0 | wr22 | ws20 | wt8 | wu25 | wv0 | ww2 | wx0 | wy73 | wz1 |
| x.164 | xa103 | xb1 | xc4 | xd5 | xe36 | xf3 | xg0 | xh1 | xi102 | xj0 | xk0 | xl39 | xm1 | xn1 | xo41 | xp0 | xq0 | xr0 | xs31 | xt70 | xu5 | xv0 | xw3 | xx38 | xy30 | xz19 |
| y.2007 | ya2143 | yb27 | yc115 | yd272 | ye301 | yf12 | yg30 | yh22 | yi192 | yj23 | yk86 | yl1104 | ym148 | yn1826 | yo271 | yp15 | yq6 | yr291 | ys401 | yt104 | yu141 | yv106 | yw4 | yx28 | yy23 | yz78 |
| z.160 | za860 | zb4 | zc2 | zd2 | ze373 | zf0 | zg1 | zh43 | zi364 | zj2 | zk2 | zl123 | zm35 | zn4 | zo110 | zp2 | zq0 | zr32 | zs4 | zt4 | zu73 | zv2 | zw3 | zx1 | zy147 | zz45 |

OUTPUT

Create 20 new names based on bigram probabilites

junide.
janasah.
p.
cony.
a.
nn.
kohin.
tolian.

juee.
ksahnaauranilevias.
dedainrwieta.
ssonielylarte.
faveumerifontume.
phynslenaruani.
core.
yaenon.
ka.
jabdinerimikimaynin.
anaasn.
ssorionsush.

Loss function - Maximum likelihood estimation = 2.4544
