

Open-LLM-V-Tuber

In diesem kleinen Projekt geht es um den Versuch den virtuellen, KI gesteuerten Chatbot. Open-LLM-V-Tuber zum Laufen zu bekommen. Der Chatbot selbst stammt vom chinesischen Entwickler Yi-Ting Chiu

Der Container

Zuerst möchte ich versuchen, den Chatbot in einem Container zu hosten. Dazu erstelle ich mir folgenden Container

Create: LXC Container

General

Template

Disks

CPU

Memory

Network

DNS

Confirm

Key ↑	Value
cores	4
hostname	Hatsukaze
memory	2048
nameserver	192.168.2.7
net0	name=eth0,bridge=vbr0,firewall=1,ip6=dhcp,ip=dhcp
nodename	soryu
ostemplate	local:vztmpl/ubuntu-22.04-standard_22.04-1_amd64.tar.zst
pool	
rootfs	local:25
searchdomain	sotoba.de
ssh-public-keys	
swap	2048
vmid	102

☐ Start after created

Advanced ☒

Back

Finish

Nach dem Erstellen des Containers, bringe ich ihn erstmal auf den neusten Stand

```
apt-get update && apt-get upgrade && reboot
```

```

Retched 24.0 MB in 12s (2036 KB/s)
Preparing package lists... Done
Fetching package lists... Done
Building dependency tree... Done
Calculating upgrade... Done
The following packages have been kept back:
 libudev1 python3-update-manager ubuntu-advantage-tools udev update-manager-core
The following packages will be upgraded:
 apt-get apt-utils base-files bash bind9-host bind9-libs bind9utils busybox-static ca-certificates coreutils epio dbus distro-info
distro-info-data dmidecode dmccat dpkg e2fsprogs eject file gcc-12-base gpgv zip iptables irqbalance isc-dhcp-client isc-dhcp-common kbd less libapparmor1
libapt-pkg6.0 libblkid1 libbpf0 libc-bin libc6 libc6a libc6a2 libc6a2t libc6a2t1 libc6a2t2 libc6a2t3 libc6a2t4 libc6a2t5 libc6a2t6 libc6a2t7 libc6a2t8 libc6a2t9
libc6a2t10 libc6a2t11 libc6a2t12 libc6a2t13 libc6a2t14 libc6a2t15 libc6a2t16 libc6a2t17 libc6a2t18 libc6a2t19 libc6a2t20 libc6a2t21 libc6a2t22 libc6a2t23
libc6a2t24 libc6a2t25 libc6a2t26 libc6a2t27 libc6a2t28 libc6a2t29 libc6a2t30 libc6a2t31 libc6a2t32 libc6a2t33 libc6a2t34 libc6a2t35 libc6a2t36 libc6a2t37
libc6a2t38 libc6a2t39 libc6a2t40 libc6a2t41 libc6a2t42 libc6a2t43 libc6a2t44 libc6a2t45 libc6a2t46 libc6a2t47 libc6a2t48 libc6a2t49 libc6a2t50 libc6a2t51
libc6a2t52 libc6a2t53 libc6a2t54 libc6a2t55 libc6a2t56 libc6a2t57 libc6a2t58 libc6a2t59 libc6a2t60 libc6a2t61 libc6a2t62 libc6a2t63 libc6a2t64 libc6a2t65
libc6a2t66 libc6a2t67 libc6a2t68 libc6a2t69 libc6a2t70 libc6a2t71 libc6a2t72 libc6a2t73 libc6a2t74 libc6a2t75 libc6a2t76 libc6a2t77 libc6a2t78 libc6a2t79
libc6a2t80 libc6a2t81 libc6a2t82 libc6a2t83 libc6a2t84 libc6a2t85 libc6a2t86 libc6a2t87 libc6a2t88 libc6a2t89 libc6a2t90 libc6a2t91 libc6a2t92 libc6a2t93
libc6a2t94 libc6a2t95 libc6a2t96 libc6a2t97 libc6a2t98 libc6a2t99 libc6a2t100 libc6a2t101 libc6a2t102 libc6a2t103 libc6a2t104 libc6a2t105 libc6a2t106
libc6a2t107 libc6a2t108 libc6a2t109 libc6a2t110 libc6a2t111 libc6a2t112 libc6a2t113 libc6a2t114 libc6a2t115 libc6a2t116 libc6a2t117 libc6a2t118 libc6a2t119
libc6a2t120 libc6a2t121 libc6a2t122 libc6a2t123 libc6a2t124 libc6a2t125 libc6a2t126 libc6a2t127 libc6a2t128 libc6a2t129 libc6a2t130 libc6a2t131 libc6a2t132
libc6a2t133 libc6a2t134 libc6a2t135 libc6a2t136 libc6a2t137 libc6a2t138 libc6a2t139 libc6a2t140 libc6a2t141 libc6a2t142 libc6a2t143 libc6a2t144 libc6a2t145
libc6a2t146 libc6a2t147 libc6a2t148 libc6a2t149 libc6a2t150 libc6a2t151 libc6a2t152 libc6a2t153 libc6a2t154 libc6a2t155 libc6a2t156 libc6a2t157 libc6a2t158
libc6a2t159 libc6a2t160 libc6a2t161 libc6a2t162 libc6a2t163 libc6a2t164 libc6a2t165 libc6a2t166 libc6a2t167 libc6a2t168 libc6a2t169 libc6a2t170 libc6a2t171
libc6a2t172 libc6a2t173 libc6a2t174 libc6a2t175 libc6a2t176 libc6a2t177 libc6a2t178 libc6a2t179 libc6a2t180 libc6a2t181 libc6a2t182 libc6a2t183 libc6a2t184
libc6a2t185 libc6a2t186 libc6a2t187 libc6a2t188 libc6a2t189 libc6a2t190 libc6a2t191 libc6a2t192 libc6a2t193 libc6a2t194 libc6a2t195 libc6a2t196 libc6a2t197
libc6a2t198 libc6a2t199 libc6a2t200 libc6a2t201 libc6a2t202 libc6a2t203 libc6a2t204 libc6a2t205 libc6a2t206 libc6a2t207 libc6a2t208 libc6a2t209 libc6a2t210
libc6a2t211 libc6a2t212 libc6a2t213 libc6a2t214 libc6a2t215 libc6a2t216 libc6a2t217 libc6a2t218 libc6a2t219 libc6a2t220 libc6a2t221 libc6a2t222 libc6a2t223
libc6a2t224 libc6a2t225 libc6a2t226 libc6a2t227 libc6a2t228 libc6a2t229 libc6a2t230 libc6a2t231 libc6a2t232 libc6a2t233 libc6a2t234 libc6a2t235 libc6a2t236
libc6a2t237 libc6a2t238 libc6a2t239 libc6a2t240 libc6a2t241 libc6a2t242 libc6a2t243 libc6a2t244 libc6a2t245 libc6a2t246 libc6a2t247 libc6a2t248 libc6a2t249
libc6a2t250 libc6a2t251 libc6a2t252 libc6a2t253 libc6a2t254 libc6a2t255 libc6a2t256 libc6a2t257 libc6a2t258 libc6a2t259 libc6a2t260 libc6a2t261 libc6a2t262
libc6a2t263 libc6a2t264 libc6a2t265 libc6a2t266 libc6a2t267 libc6a2t268 libc6a2t269 libc6a2t270 libc6a2t271 libc6a2t272 libc6a2t273 libc6a2t274 libc6a2t275
libc6a2t276 libc6a2t277 libc6a2t278 libc6a2t279 libc6a2t280 libc6a2t281 libc6a2t282 libc6a2t283 libc6a2t284 libc6a2t285 libc6a2t286 libc6a2t287 libc6a2t288
libc6a2t289 libc6a2t290 libc6a2t291 libc6a2t292 libc6a2t293 libc6a2t294 libc6a2t295 libc6a2t296 libc6a2t297 libc6a2t298 libc6a2t299 libc6a2t300 libc6a2t301
libc6a2t302 libc6a2t303 libc6a2t304 libc6a2t305 libc6a2t306 libc6a2t307 libc6a2t308 libc6a2t309 libc6a2t310 libc6a2t311 libc6a2t312 libc6a2t313 libc6a2t314
libc6a2t315 libc6a2t316 libc6a2t317 libc6a2t318 libc6a2t319 libc6a2t320 libc6a2t321 libc6a2t322 libc6a2t323 libc6a2t324 libc6a2t325 libc6a2t326 libc6a2t327
libc6a2t328 libc6a2t329 libc6a2t330 libc6a2t331 libc6a2t332 libc6a2t333 libc6a2t334 libc6a2t335 libc6a2t336 libc6a2t337 libc6a2t338 libc6a2t339 libc6a2t340
libc6a2t341 libc6a2t342 libc6a2t343 libc6a2t344 libc6a2t345 libc6a2t346 libc6a2t347 libc6a2t348 libc6a2t349 libc6a2t350 libc6a2t351 libc6a2t352 libc6a2t353
libc6a2t354 libc6a2t355 libc6a2t356 libc6a2t357 libc6a2t358 libc6a2t359 libc6a2t360 libc6a2t361 libc6a2t362 libc6a2t363 libc6a2t364 libc6a2t365 libc6a2t366
libc6a2t367 libc6a2t368 libc6a2t369 libc6a2t370 libc6a2t371 libc6a2t372 libc6a2t373 libc6a2t374 libc6a2t375 libc6a2t376 libc6a2t377 libc6a2t378 libc6a2t379
libc6a2t380 libc6a2t381 libc6a2t382 libc6a2t383 libc6a2t384 libc6a2t385 libc6a2t386 libc6a2t387 libc6a2t388 libc6a2t389 libc6a2t390 libc6a2t391 libc6a2t392
libc6a2t393 libc6a2t394 libc6a2t395 libc6a2t396 libc6a2t397 libc6a2t398 libc6a2t399 libc6a2t400 libc6a2t401 libc6a2t402 libc6a2t403 libc6a2t404 libc6a2t405
libc6a2t406 libc6a2t407 libc6a2t408 libc6a2t409 libc6a2t410 libc6a2t411 libc6a2t412 libc6a2t413 libc6a2t414 libc6a2t415 libc6a2t416 libc6a2t417 libc6a2t418
libc6a2t419 libc6a2t420 libc6a2t421 libc6a2t422 libc6a2t423 libc6a2t424 libc6a2t425 libc6a2t426 libc6a2t427 libc6a2t428 libc6a2t429 libc6a2t430 libc6a2t431
libc6a2t432 libc6a2t433 libc6a2t434 libc6a2t435 libc6a2t436 libc6a2t437 libc6a2t438 libc6a2t439 libc6a2t440 libc6a2t441 libc6a2t442 libc6a2t443 libc6a2t444
libc6a2t445 libc6a2t446 libc6a2t447 libc6a2t448 libc6a2t449 libc6a2t450 libc6a2t451 libc6a2t452 libc6a2t453 libc6a2t454 libc6a2t455 libc6a2t456 libc6a2t457
libc6a2t458 libc6a2t459 libc6a2t460 libc6a2t461 libc6a2t462 libc6a2t463 libc6a2t464 libc6a2t465 libc6a2t466 libc6a2t467 libc6a2t468 libc6a2t469 libc6a2t470
libc6a2t471 libc6a2t472 libc6a2t473 libc6a2t474 libc6a2t475 libc6a2t476 libc6a2t477 libc6a2t478 libc6a2t479 libc6a2t480 libc6a2t481 libc6a2t482 libc6a2t483
libc6a2t484 libc6a2t485 libc6a2t486 libc6a2t487 libc6a2t488 libc6a2t489 libc6a2t490 libc6a2t491 libc6a2t492 libc6a2t493 libc6a2t494 libc6a2t495 libc6a2t496
libc6a
```

Nach dem Neustart installiere ich dann die nötigen Voraussetzungen für den Chatbot. Zuerst Git

```
apt install git
```

```
root@Matsukaze:~# apt install git
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  git-man libbrotlili libcurl3-gnutls liberror-perl libgdbm-compat4 libperl5.34 librtmp1 libssh-4 patch perl perl-modules-5.34
Suggested packages:
  git-daemon-run | git-daemon-sysvinit git-doc git-email git-gui gitk gitweb git-cvs git-mediawiki git-svn diffutils-doc perl-doc libterm-readline-gnu-perl
  | libterm-readline-perl-perl make libtap-harness-archive-perl
The following NEW packages will be installed:
  git git-man libbrotlili libcurl3-gnutls liberror-perl libgdbm-compat4 libperl5.34 librtmp1 libssh-4 patch perl perl-modules-5.34
0 upgraded, 12 newly installed, 0 to remove and 5 not upgraded.
Need to get 13.1 MB of archives.
After this operation, 71.5 MB of additional disk space will be used.
Do you want to continue? [Y/n]
```

Danach ffmpeg

```
apt install ffmpeg
```

```
root@shatakuva:~# apt install ffmpeg
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
 alsa-topology-conf alsa-ucm-conf fontconfig fontconfig-config fonts-dejavu-core i965-v4-driver intel-media-v4-driver libaacs0 libaom3 libasound2 libasound2-data
libasn1c9 libasn1c9s0 libavc1394-0 libavcodec58 libavfilter7 libavformat58 libavutil56 libbdplus0 libblas3 libblas3-dev libb2b0 libb2b0c0
libbcaio-gobject2 libbcaio2 libbido-cdda libbido-panorama2 libbido9 libbchcomprint libbcode2-1.0 libbdiatriel libbdiavl5 libbdi394-25 libbdecor-0.0
libbdi9 libbdi9s0 libbdo0 libbdo1 libbdo2 libbdo3 libbdo4 libbdo5 libbdo6 libbdo7 libbdo8 libbdo9 libbdoconf1 libbdoconf1-dev libbdoconf1-sysv0 libbdoconf1-sysv1
libbdoconf1-sysv2 libbdoconf1-sysv3 libbdoconf1-sysv4 libbdoconf1-sysv5 libbdoconf1-sysv6 libbdoconf1-sysv7 libbdoconf1-sysv8 libbdoconf1-sysv9 libbdoconf1-sysv10
libbdoconf1-sysv11 libbdoconf1-sysv12 libbdoconf1-sysv13 libbdoconf1-sysv14 libbdoconf1-sysv15 libbdoconf1-sysv16 libbdoconf1-sysv17 libbdoconf1-sysv18
libbdoconf1-sysv19 libbdoconf1-sysv20 libbdoconf1-sysv21 libbdoconf1-sysv22 libbdoconf1-sysv23 libbdoconf1-sysv24 libbdoconf1-sysv25 libbdoconf1-sysv26
libbdoconf1-sysv27 libbdoconf1-sysv28 libbdoconf1-sysv29 libbdoconf1-sysv30 libbdoconf1-sysv31 libbdoconf1-sysv32 libbdoconf1-sysv33 libbdoconf1-sysv34
libbdoconf1-sysv35 libbdoconf1-sysv36 libbdoconf1-sysv37 libbdoconf1-sysv38 libbdoconf1-sysv39 libbdoconf1-sysv40 libbdoconf1-sysv41 libbdoconf1-sysv42
libbdoconf1-sysv43 libbdoconf1-sysv44 libbdoconf1-sysv45 libbdoconf1-sysv46 libbdoconf1-sysv47 libbdoconf1-sysv48 libbdoconf1-sysv49 libbdoconf1-sysv50
libbdoconf1-sysv51 libbdoconf1-sysv52 libbdoconf1-sysv53 libbdoconf1-sysv54 libbdoconf1-sysv55 libbdoconf1-sysv56 libbdoconf1-sysv57 libbdoconf1-sysv58
libbdoconf1-sysv59 libbdoconf1-sysv60 libbdoconf1-sysv61 libbdoconf1-sysv62 libbdoconf1-sysv63 libbdoconf1-sysv64 libbdoconf1-sysv65 libbdoconf1-sysv66
libbdoconf1-sysv67 libbdoconf1-sysv68 libbdoconf1-sysv69 libbdoconf1-sysv70 libbdoconf1-sysv71 libbdoconf1-sysv72 libbdoconf1-sysv73 libbdoconf1-sysv74
libbdoconf1-sysv75 libbdoconf1-sysv76 libbdoconf1-sysv77 libbdoconf1-sysv78 libbdoconf1-sysv79 libbdoconf1-sysv80 libbdoconf1-sysv81 libbdoconf1-sysv82
libbdoconf1-sysv83 libbdoconf1-sysv84 libbdoconf1-sysv85 libbdoconf1-sysv86 libbdoconf1-sysv87 libbdoconf1-sysv88 libbdoconf1-sysv89 libbdoconf1-sysv90
libbdoconf1-sysv91 libbdoconf1-sysv92 libbdoconf1-sysv93 libbdoconf1-sysv94 libbdoconf1-sysv95 libbdoconf1-sysv96 libbdoconf1-sysv97 libbdoconf1-sysv98
libbdoconf1-sysv99 libbdoconf1-sysv100 libbdoconf1-sysv101 libbdoconf1-sysv102 libbdoconf1-sysv103 libbdoconf1-sysv104 libbdoconf1-sysv105 libbdoconf1-sysv106
libbdoconf1-sysv107 libbdoconf1-sysv108 libbdoconf1-sysv109 libbdoconf1-sysv110 libbdoconf1-sysv111 libbdoconf1-sysv112 libbdoconf1-sysv113 libbdoconf1-sysv114
libbdoconf1-sysv115 libbdoconf1-sysv116 libbdoconf1-sysv117 libbdoconf1-sysv118 libbdoconf1-sysv119 libbdoconf1-sysv120 libbdoconf1-sysv121 libbdoconf1-sysv122
libbdoconf1-sysv123 libbdoconf1-sysv124 libbdoconf1-sysv125 libbdoconf1-sysv126 libbdoconf1-sysv127 libbdoconf1-sysv128 libbdoconf1-sysv129 libbdoconf1-sysv130
libbdoconf1-sysv131 libbdoconf1-sysv132 libbdoconf1-sysv133 libbdoconf1-sysv134 libbdoconf1-sysv135 libbdoconf1-sysv136 libbdoconf1-sysv137 libbdoconf1-sysv138
libbdoconf1-sysv139 libbdoconf1-sysv140 libbdoconf1-sysv141 libbdoconf1-sysv142 libbdoconf1-sysv143 libbdoconf1-sysv144 libbdoconf1-sysv145 libbdoconf1-sysv146
libbdoconf1-sysv147 libbdoconf1-sysv148 libbdoconf1-sysv149 libbdoconf1-sysv150 libbdoconf1-sysv151 libbdoconf1-sysv152 libbdoconf1-sysv153 libbdoconf1-sysv154
libbdoconf1-sysv155 libbdoconf1-sysv156 libbdoconf1-sysv157 libbdoconf1-sysv158 libbdoconf1-sysv159 libbdoconf1-sysv160 libbdoconf1-sysv161 libbdoconf1-sysv162
libbdoconf1-sysv163 libbdoconf1-sysv164 libbdoconf1-sysv165 libbdoconf1-sysv166 libbdoconf1-sysv167 libbdoconf1-sysv168 libbdoconf1-sysv169 libbdoconf1-sysv170
libbdoconf1-sysv171 libbdoconf1-sysv172 libbdoconf1-sysv173 libbdoconf1-sysv174 libbdoconf1-sysv175 libbdoconf1-sysv176 libbdoconf1-sysv177 libbdoconf1-sysv178
libbdoconf1-sysv179 libbdoconf1-sysv180 libbdoconf1-sysv181 libbdoconf1-sysv182 libbdoconf1-sysv183 libbdoconf1-sysv184 libbdoconf1-sysv185 libbdoconf1-sysv186
libbdoconf1-sysv187 libbdoconf1-sysv188 libbdoconf1-sysv189 libbdoconf1-sysv190 libbdoconf1-sysv191 libbdoconf1-sysv192 libbdoconf1-sysv193 libbdoconf1-sysv194
libbdoconf1-sysv195 libbdoconf1-sysv196 libbdoconf1-sysv197 libbdoconf1-sysv198 libbdoconf1-sysv199 libbdoconf1-sysv200 libbdoconf1-sysv201 libbdoconf1-sysv202
libbdoconf1-sysv203 libbdoconf1-sysv204 libbdoconf1-sysv205 libbdoconf1-sysv206 libbdoconf1-sysv207 libbdoconf1-sysv208 libbdoconf1-sysv209 libbdoconf1-sysv210
libbdoconf1-sysv211 libbdoconf1-sysv212 libbdoconf1-sysv213 libbdoconf1-sysv214 libbdoconf1-sysv215 libbdoconf1-sysv216 libbdoconf1-sysv217 libbdoconf1-sysv218
libbdoconf1-sysv219 libbdoconf1-sysv220 libbdoconf1-sysv221 libbdoconf1-sysv222 libbdoconf1-sysv223 libbdoconf1-sysv224 libbdoconf1-sysv225 libbdoconf1-sysv226
libbdoconf1-sysv227 libbdoconf1-sysv228 libbdoconf1-sysv229 libbdoconf1-sysv230 libbdoconf1-sysv231 libbdoconf1-sysv232 libbdoconf1-sysv233 libbdoconf1-sysv234
libbdoconf1-sysv235 libbdoconf1-sysv236 libbdoconf1-sysv237 libbdoconf1-sysv238 libbdoconf1-sysv239 libbdoconf1-sysv240 libbdoconf1-sysv241 libbdoconf1-sysv242
libbdoconf1-sysv243 libbdoconf1-sysv244 libbdoconf1-sysv245 libbdoconf1-sysv246 libbdoconf1-sysv247 libbdoconf1-sysv248 libbdoconf1-sysv249 libbdoconf1-sysv250
libbdoconf1-sysv251 libbdoconf1-sysv252 libbdoconf1-sysv253 libbdoconf1-sysv254 libbdoconf1-sysv255 libbdoconf1-sysv256 libbdoconf1-sysv257 libbdoconf1-sysv258
libbdoconf1-sysv259 libbdoconf1-sysv260 libbdoconf1-sysv261 libbdoconf1-sysv262 libbdoconf1-sysv263 libbdoconf1-sysv264 libbdoconf1-sysv265 libbdoconf1-sysv266
libbdoconf1-sysv267 libbdoconf1-sysv268 libbdoconf1-sysv269 libbdoconf1-sysv270 libbdoconf1-sysv271 libbdoconf1-sysv272 libbdoconf1-sysv273 libbdoconf1-sysv274
libbdoconf1-sysv275 libbdoconf1-sysv276 libbdoconf1-sysv277 libbdoconf1-sysv278 libbdoconf1-sysv279 libbdoconf1-sysv280 libbdoconf1-sysv281 libbdoconf1-sysv282
libbdoconf1-sysv283 libbdoconf1-sysv284 libbdoconf1-sysv285 libbdoconf1-sysv286 libbdoconf1-sysv287 libbdoconf1-sysv288 libbdoconf1-sysv289 libbdoconf1-sysv290
libbdoconf1-sysv291 libbdoconf1-sysv292 libbdoconf1-sysv293 libbdoconf1-sysv294 libbdoconf1-sysv295 libbdoconf1-sysv296 libbdoconf1-sysv297 libbdoconf1-sysv298
libbdoconf1-sysv299 libbdoconf1-sysv300 libbdoconf1-sysv301 libbdoconf1-sysv302 libbdoconf1-sysv303 libbdoconf1-sysv304 libbdoconf1-sysv305 libbdoconf1-sysv306
libbdoconf1-sysv307 libbdoconf1-sysv308 libbdoconf1-sysv309 libbdoconf1-sysv310 libbdoconf1-sysv311 libbdoconf1-sysv312 libbdoconf1-sysv313 libbdoconf1-sysv314
libbdoconf1-sysv315 libbdoconf1-sysv316 libbdoconf1-sysv317 libbdoconf1-sysv318 libbdoconf1-sysv319 libbdoconf1-sysv320 libbdoconf1-sysv321 libbdoconf1-sysv322
libbdoconf1-sysv323 libbdoconf1-sysv324 libbdoconf1-sysv325 libbdoconf1-sysv326 libbdoconf1-sysv327 libbdoconf1-sysv328 libbdoconf1-sysv329 libbdoconf1-sysv330
libbdoconf1-sysv331 libbdoconf1-sysv332 libbdoconf1-sysv333 libbdoconf1-sysv334 libbdoconf1-sysv335 libbdoconf1-sysv336 libbdoconf1-sysv337 libbdoconf1-sysv338
libbdoconf1-sysv339 libbdoconf1-sysv340 libbdoconf1-sysv341 libbdoconf1-sysv342 libbdoconf1-sysv343 libbdoconf1-sysv344 libbdoconf1-sysv345 libbdoconf1-sysv346
libbdoconf1-sysv347 libbdoconf1-sysv348 libbdoconf1-sysv349 libbdoconf1-sysv350 libbdoconf1-sysv351 libbdoconf
```

Als nächstes brauche ich das Python Umgebungsmanagement

```
wget -qO- https://astral.sh/uv/install.sh | sh
```

```
root@hatsukars:~# wget -qO- https://astral.sh/uv/install.sh | sh
downloading uv 0.7.8 x86_64-unknown-linux-gnu
--2025-05-27 16:36:33-- https://github.com/astral-sh/uv/releases/download/0.7.8/uv-x86_64-unknown-linux-gnu.tar.gz
Resolving github.com (github.com)... 140.82.121.3
Connecting to github.com (github.com)[140.82.121.3]:443... connected.
HTTP request sent, awaiting response... 302 Found
Location: https://objects.githubusercontent.com/github-production-release-asset-2e65be/699532645/55b0de0c-6b6e-4516-b6f2-50931b850e08?X-Amz-Algorithm=AWS4-HMAC-SHA256&X-Amz-Credential=release-asset-production%2F20250527%2Fus-east-1%2F%3A2Paw4_request&X-Amz-Date=20250527T16352824X-Amz-Expires=300&X-Amz-Signature=3e92c293128d493816559591c76c87c753feb38f7cb816789631c6c484ce34c9b4X-Amz-SignedHeaders=host&response-content-disposition=attachment%3B%20filename%3Duv-x86_64-unknown-linux-gnu.tar.gz&response-content-type=application%2Foctet-stream [following]
--2025-05-27 16:36:33-- https://objects.githubusercontent.com/github-production-release-asset-2e65be/699532645/55b0de0c-6b6e-4516-b6f2-50931b850e08?X-Amz-Algorithm=AWS4-HMAC-SHA256&X-Amz-Credential=release-asset-production%2F20250527%2Fus-east-1%2F%3A2Paw4_request&X-Amz-Date=20250527T16352824X-Amz-Expires=300&X-Amz-Signature=3e92c293128d493816559591c76c87c753feb38f7cb816789631c6c484ce34c9b4X-Amz-SignedHeaders=host&response-content-disposition=attachment%3B%20filename%3Duv-x86_64-unknown-linux-gnu.tar.gz&response-content-type=application%2Foctet-stream
Resolving objects.githubusercontent.com (objects.githubusercontent.com)... 185.199.111.133, 185.199.109.133, 185.199.108.133, ...
Connecting to objects.githubusercontent.com (objects.githubusercontent.com)[185.199.111.133]:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 17486328 (17M) [application/octet-stream]
Saving to: 'tmp.KFnyFkqnrF.input.tar.gz'

/tmp/tmp.KFnyFkqnrF.input.tar.gz          47k [=====]           ]  7.91M  1.97MB/s   eta 5s
```

Active Directory

Da dieser Container teil des Active Directory sein soll, bereite ich die Einladung vor.
Dazu installiere ich zuerst Samba.

```
apt install sssd-ad sssd-tools adcli realmd krb5-user libnss-sss libpam-sss  
samba-common-bin oddjob oddjob-mkhomedir
```

```
root@Hatsukaze:~# apt install sssd-ad sssd-tools adcli realmd krb5-user libnss-sss libpam-sss samba-common-bin oddjob oddjob-mkhomedir
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  cracklib-runtime dirmngr gnupg gnupg-l10n gnupg-utils gpg gpg-agent gpg-wks-client gpg-wks-server gpgconf gpgsm krb5-config ldap-utils libassuan0 libavahi-client3
  libavahi-common-data libavahi-common3 libbasicobjects0 libc-ares2 libcollection4 libcrack2 libcups2 libdhash1 libgpgme11 libgssrpc4 libini-config5 libipa-hbac0
  libkadm5clnt-mit12 libkadm5srv-mit12 libkdb5-10 libkksba8 libldap-2.5-0 libldap-common libldb2 libnfsidmap1 libnl-3-200 libnl-route-3-200 libnph0 libpam-pwquality
  libpath-util1 libpolkit-agent-1-0 libpolkit-gobject-1-0 libpwquality-common libpwquality1 libpython3.10 libref-array1 libsass2-modules libsass2-modules-gssapi-mit
  libssmclient libss-certmap0 libsss-idmap0 libsss-nss-idmap0 libtalloc2 libtdb1 libtevent0 libwbclient0 pinentry-curses pkexec policykit-1 polkitd python3-gpg
  python3-ldb python3-samba python3-sss python3-systemd python3-talloc python3-tdb samba-common samba-dsdb-modules samba-libs sssd sssd-ad-common sssd-common
  sssd-dbus sssd-ipa sssd-krb5 sssd-krb5-common sssd-ldap sssd-proxy wamerican
Suggested packages:
  dbus-user-session pinentry-gnome3 tor parcimonie xloadimage scdsmon krb5-k5tls cups-common krb5-doc libsass2-modules-ldap libsass2-modules-otp libsass2-modules-sql
  pinentry-doc heimdal-clients python3-markdown python3-dnspython libsss-audo
The following NEW packages will be installed:
  adcli cracklib-runtime dirmngr gnupg gnupg-l10n gnupg-utils gpg gpg-agent gpg-wks-client gpg-wks-server gpgconf gpgsm krb5-config krb5-user ldap-utils libassuan0
  libavahi-client3 libavahi-common-data libavahi-common3 libbasicobjects0 libc-ares2 libcollection4 libcrack2 libcups2 libdhash1 libgpgme11 libgssrpc4 libini-config5
  libipa-hbac0 libkadm5clnt-mit12 libkadm5srv-mit12 libkdb5-10 libkksba8 libldap-2.5-0 libldap-common libldb2 libnfsidmap1 libnl-3-200 libnl-route-3-200 libnph0
  libpam-pwquality libpam-sss libpath-util1 libpolkit-agent-1-0 libpolkit-gobject-1-0 libpwquality-common libpwquality1 libpython3.10 libref-array1
  libsass2-modules libsass2-modules-gssapi-mit libssmclient libss-certmap0 libsss-idmap0 libsss-nss-idmap0 libtalloc2 libtdb1 libtevent0 libwbclient0 oddjob
  oddjob-mkhomedir pinentry-curses pkexec policykit-1 polkitd python3-gpg python3-ldb python3-samba python3-sss python3-systemd python3-talloc python3-tdb realmd
  samba-common samba-common-bin samba-dsdb-modules samba-libs sssd sssd-ad sssd-ad-common sssd-common sssd-dbus sssd-ipa sssd-krb5 sssd-krb5-common sssd-ldap
  sssd-proxy sssd-tools wamerican
0 upgraded, 90 newly installed, 0 to remove and 5 not upgraded.
Need to get 20.3 MB of archives.
After this operation, 85.8 MB of additional disk space will be used.
Do you want to continue? [Y/n]
```

Erstelle die sssd.conf Datei mit folgenden Daten.

```
nano /etc/sss/sss.conf
```

```
[sss]
```

```
services = nss, pam, ssh
config_file_version = 2
domains = sotoba.de
```

```
[domain/sotoba.de]
```

```
id_provider = ad
access_provider = ad
ad_domain = sotoba.de
krb5_realm = SOToba.DE
realmd_tags = manages-system joined-with-adcli
cache_credentials = True
default_shell = /bin/bash
fallback_homedir = /home/%u@%d
ldap_id_mapping = True
use_fully_qualified_names = False
```

Ändere die Berechtigungen der Datei

```
chmod 600 /etc/sss/sss.conf
```

```
chown root:root /etc/sss/sss.conf
```

```
ls -l /etc/sss/sss.conf
```

```
root@Hatsukaze:~# chmod 600 /etc/sss/sss.conf
chown root:root /etc/sss/sss.conf
ls -l /etc/sss/sss.conf
-rw----- 1 root root 365 May 27 16:18 /etc/sss/sss.conf
root@Hatsukaze:~#
```

Und lade den Container in die Domäne ein und Schau, ob der Dienst richtig gestartet wurde

```
adcli join sotoa.de
```

```
systemctl status sssd
```

```
root@Hatsukaze:~# adcli join sotoa.de
Password for Administrator@SOTOA.DE:
root@Hatsukaze:~# systemctl status sssd
* sssd.service - System Security Services Daemon
   Loaded: loaded (/lib/systemd/system/sss.service; enabled; vendor preset: enabled)
   Active: active (running) since Tue 2025-05-27 16:21:52 UTC; 385ms ago
     Main PID: 2309 (sss)
       Tasks: 5 (limit: 9329)
      Memory: 50.5M
         CPU: 1.517s
    CGroup: /system.slice/sss.service
            |-2309 /usr/sbin/sss -i --logger=files
            |-2319 /usr/libexec/sss/sss_be --domain sotoa.de --uid 0 --gid 0 --logger=files
            |-2321 /usr/libexec/sss/sss_nss --uid 0 --gid 0 --logger=files
            |-2322 /usr/libexec/sss/sss_ssh --uid 0 --gid 0 --logger=files
            |-2323 /usr/libexec/sss/sss_pam --uid 0 --gid 0 --logger=files

May 27 16:21:49 Hatsukaze sssd_ssh[2315]: Starting up
May 27 16:21:49 Hatsukaze sssd_pam[2314]: Starting up
May 27 16:21:49 Hatsukaze sssd_nss[2316]: Starting up
May 27 16:21:49 Hatsukaze sssd_ssh[2317]: Starting up
May 27 16:21:49 Hatsukaze sssd_pam[2318]: Starting up
May 27 16:21:51 Hatsukaze sssd_be[2319]: Starting up
May 27 16:21:51 Hatsukaze sssd_ssh[2322]: Starting up
May 27 16:21:52 Hatsukaze sssd_nss[2321]: Starting up
May 27 16:21:52 Hatsukaze sssd_pam[2323]: Starting up
May 27 16:21:52 Hatsukaze systemd[1]: Started System Security Services Daemon.
root@Hatsukaze:~#
```

Der Chatbot

Nun lade ich den Bot von Github runter

git clone https://github.com/Open-LLM-VTuber/Open-LLM-VTuber --recursive

```
root@Hatsukaze:~# git clone https://github.com/Open-LLM-VTuber/Open-LLM-VTuber --recursive
Cloning into 'Open-LLM-VTuber'...
remote: Enumerating objects: 5377, done.
remote: Counting objects: 100% (340/340), done.
remote: Compressing objects: 100% (106/106), done.
remote: Total 5377 (delta 271), reused 238 (delta 233), pack-reused 5037 (from 2)
Receiving objects: 100% (5377/5377), 45.46 MiB | 1.99 MiB/s, done.
Resolving deltas: 100% (3422/3422), done.
Submodule 'frontend' (https://github.com/Open-LLM-VTuber/Open-LLM-VTuber-Web) registered for path 'frontend'
Cloning into '/root/Open-LLM-VTuber/frontend'...
remote: Enumerating objects: 2954, done.
remote: Counting objects: 100% (711/711), done.
remote: Compressing objects: 100% (179/179), done.
remote: Total 2954 (delta 552), reused 581 (delta 532), pack-reused 2243 (from 1)
Receiving objects: 100% (2954/2954), 32.69 MiB | 2.01 MiB/s, done.
Resolving deltas: 100% (1852/1852), done.
remote: Enumerating objects: 5, done.
remote: Counting objects: 100% (3/3), done.
remote: Compressing objects: 100% (3/3), done.
remote: Total 5 (delta 0), reused 0 (delta 0), pack-reused 2 (from 1)
Unpacking objects: 100% (5/5), 574.25 KiB | 1.63 MiB/s, done.
From https://github.com/Open-LLM-VTuber/Open-LLM-VTuber-Web
* branch                    59808e04234378d50fc33d49275814191ab2a569 -> FETCH_HEAD
Submodule path 'frontend': checked out '59808e04234378d50fc33d49275814191ab2a569'
root@Hatsukaze:~#
```

Dann brauche ich das Programm uv, das ich mit wget heruntergeladen habe. Jedoch
zeit er bei dem Befehl

uv -version

```
root@Hatsukaze:~# uv --version
uv: command not found
```

Um das zu ändern, bearbeite ich die .bashrc Datei und füge folgende Anweisung ans
Ende der Datei

nano /root/.bashrc

export PATH=/root/.local/bin:\$PATH

```
GNU nano 6.2 /root/.bashrc
if [ -x /usr/bin/dircolors ]; then
    test -r ~/.dircolors && eval "$(dircolors -b ~/.dircolors)" || eval "$(dircolors -b)"
    alias ls='ls --color=auto'
    #alias dir='dir --color=auto'
    #alias vdir='vdir --color=auto'

    alias grep='grep --color=auto'
    alias fgrep='fgrep --color=auto'
    alias egrep='egrep --color=auto'
fi

# some more ls aliases
alias ll='ls -alF'
alias la='ls -A'
alias l='ls -CF'

# Alias definitions.
# You may want to put all your additions into a separate file like
# ~/.bash_aliases, instead of adding them here directly.
# See /usr/share/doc/bash-doc/examples in the bash-doc package.

if [ -f ~/.bash_aliases ]; then
    . ~/.bash_aliases
fi

# enable programmable completion features (you don't need to enable
# this, if it's already enabled in /etc/bash.bashrc and /etc/profile
# sources /etc/bash.bashrc).
if [ -f /etc/bash_completion ] && ! shopt -oq posix; then
    #
    . /etc/bash_completion
#fi

. "$HOME/.local/bin/env"
export PATH=/root/.local/bin:$PATH
```

Ob es funktioniert hat. Zeigt sich nach einem reboot

```
Ubuntu 22.04.5 LTS Hatsukaze tty1

Hatsukaze login: root
Password:
Welcome to Ubuntu 22.04.5 LTS (GNU/Linux 6.8.12-10-pve x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/pro
New release '24.04.2 LTS' available.
Run 'do-release-upgrade' to upgrade to it.

Last login: Tue May 27 16:28:09 UTC 2025 on lxc/tty1
root@Hatsukaze:~# uv --version
uv 0.7.8
root@Hatsukaze:~#
```

Nun Wechsel ich in das Stammverzeichnis des Bots und führe den Befehl uv sync aus, was den Chatbot installiert

```
root@Hatsukaze:~# cd Open-LLM-VTuber
root@Hatsukaze:~/Open-LLM-VTuber# uv sync
Using CPython 3.10.12 interpreter at: /usr/bin/python3.10
Creating virtual environment at: .venv
Resolved 275 packages in 9.27s
   Built srt==3.5.3
.: Preparing packages... (79/110)
protobuf ----- 959.49 KiB/1.00 MiB
pygments ----- 1007.45 KiB/1.17 MiB
soundfile ----- 992.00 KiB/1.25 MiB
aiohttp ----- 1020.59 KiB/1.52 MiB
networkx ----- 1.03 MiB/1.64 MiB
pydantic-core ----- 973.19 KiB/1.90 MiB
torchaudio ----- 939.00 KiB/3.22 MiB
uvloop ----- 948.81 KiB/3.65 MiB
virtualenv ----- 1004.79 KiB/4.10 MiB
silero-vad ----- 1022.80 KiB/4.79 MiB
sympy ----- 1.03 MiB/5.90 MiB
ruff ----- 994.38 KiB/10.76 MiB
onnxruntime ----- 990.05 KiB/12.71 MiB
nvidia-cuda-cupti-cu12 ----- 962.38 KiB/13.17 MiB
numpy ----- 991.18 KiB/17.40 MiB
nvidia-nvjitlink-cu12 ----- 1005.77 KiB/20.09 MiB
sherpa-onnx ----- 1010.74 KiB/21.16 MiB
nvidia-cuda-nvrtc-cu12 ----- 923.00 KiB/23.50 MiB
azure-cognitiveservices-speech ----- 930.34 KiB/37.89 MiB
scipy ----- 986.89 KiB/38.72 MiB
nvidia-cusolver-cu12 ----- 990.61 KiB/53.70 MiB
nvidia-cusparse-cu12 ----- 960.00 KiB/122.01 MiB
nvidia-cusparselt-cu12 ----- 963.56 KiB/143.11 MiB
nvidia-nccl-cu12 ----- 1005.03 KiB/179.91 MiB
nvidia-cusparse-cu12 ----- 1010.38 KiB/197.84 MiB
nvidia-cufft-cu12 ----- 974.67 KiB/201.66 MiB
triton ----- 981.62 KiB/241.37 MiB
nvidia-cublas-cu12 ----- 955.00 KiB/346.60 MiB
nvidia-cudnn-cu12 ----- 1005.08 KiB/633.96 MiB
torch ----- 1011.56 KiB/731.17 MiB
```

Nun starte ich das Hauptprogramm

uv run run_server.py

```
root@Hatsukaze:~/Open-LLM-VTuber# uv run run_server.py
2025-05-27 17:40:56.88 | INFO | __main__:modules:86 - Running in standard mode. For detailed debug logs, use: uv run run_server.py --verbose
2025-05-27 17:40:56 | INFO | __main__:run:37 | Open-LLM-VTuber, version v1.1.3
2025-05-27 17:40:56 | WARNING | upgrade:sync_user_config:352 | Warning: config.yaml not found
2025-05-27 17:40:56 | WARNING | upgrade:sync_user_config:353 | Copying default configuration from template
2025-05-27 17:40:56 | INFO | src.open_llm_vtuber.service_context:init_live2d:156 | Initializing Live2D: shizuku-local
2025-05-27 17:40:56 | INFO | src.open_llm_vtuber.live2d_model:lookup_model_info:142 | Model Information Loaded.
2025-05-27 17:40:56 | INFO | src.open_llm_vtuber.service_context:init_asr:166 | Initializing ASR: sherpa_onnx_asr
2025-05-27 17:40:56 | INFO | src.open_llm_vtuber.asr.sherpa_onnx_asr:_init_:61 | Sherpa-ONNX-ASR: Using cpu for inference
2025-05-27 17:40:56 | WARNING | src.open_llm_vtuber.asr.sherpa_onnx_asr:_create_recognizer:166 | SenseVoice model not found. Downloading the model...
2025-05-27 17:40:56 | WARNING | src.open_llm_vtuber.asr.utils:check_and_extract_local_file:160 | Local file not found or not a tar.bz2 archive: models/sherpa-onnx-sense-voice-zh-en-ja-ko-yue-2024-07-17.tar.bz2
2025-05-27 17:40:56 | INFO | src.open_llm_vtuber.asr.sherpa_onnx_asr:_create_recognizer:176 | Local file not found. Downloading...
2025-05-27 17:40:56 | INFO | src.open_llm_vtuber.asr.utils:download_and_extract:82 | %Downloading https://github.com/k2-fsa/sherpa-onnx/releases/download/asr-model/s/sherpa-onnx-sense-voice-zh-en-ja-ko-yue-2024-07-17.tar.bz2 to ~/models/sherpa-onnx-sense-voice-zh-en-ja-ko-yue-2024-07-17.tar.bz2...
sherpa-onnx-sense-voice-zh-en-ja-ko-yue-2024-07-17.tar.bz2: 5% | ██████████ | 51.7M/999M [00:26<11:32, 1.44MiB/s]
```

Jetzt fehlt noch die KI. Dazu lade ich zuerst einmal LLama runter

curl -fsSL https://ollama.com/install.sh | sh

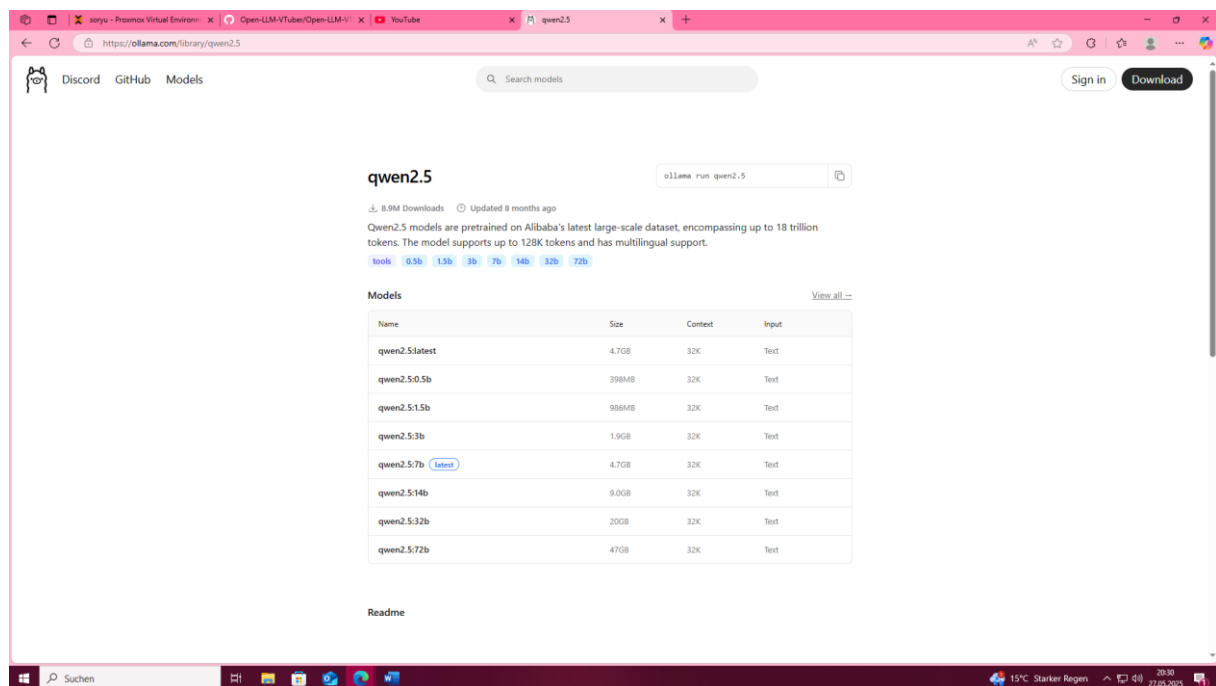
```
root@Hatsukaze:~# curl -fsSL https://ollama.com/install.sh | sh
>>> Installing ollama to /usr/local
>>> Downloading Linux amd64 bundle
# 2.4%
```

Danach lade ich ein passendes Model runter

Informationen über verscheinde Modelle finde ich hier:

[Ollama Search](#)

[qwen2.5:1.5b](#)



Aber da die KI zuerst einmal nur im CPU-Modus läuft, wähle ich ein schlankes Modell zum Testen wie qwen:0.5b und lade es wie folgt runter. Danach schaue ich nach ob alles vor Ort ist und starte die KI

```
ollama pull qwen:0.5b
```

```
ollama list
```

```
ollama run qwen:0.5b
```

```
root@Hatsukaze:~# ollama pull qwen:0.5b
pulling manifest
pulling fad2a06e4cc7: 100% 394 MB
pulling 41c2cf8c272f: 100% 7.3 KB
pulling 1da0581fd4ce: 100% 130 B
pulling f02dd72bb242: 100% 59 B
pulling ea0a531a013b: 100% 485 B
verifying sha256 digest
writing manifest
success
root@Hatsukaze:~# ollama list
NAME      ID          SIZE      MODIFIED
qwen:0.5b b5dc5e784f2a 394 MB    23 seconds ago
root@Hatsukaze:~# ollama run qwen:0.5b
>>>
Use Ctrl + d or /bye to exit.
>>> test
I'm sorry, but I don't have enough information to generate a response. Can you please provide more context or details?

>>> who are you?
As an artificial intelligence language model, I am not a person, but rather a machine designed to process and generate human-like text based on various input parameters.

In addition to generating text, I can also assist you with various tasks, such as answering questions, providing recommendations, and helping with research.

Is there anything specific that you would like me to help you with?

>>> [and a message (/? for help)
```