

Contributions

|— LICENSE |— README.md |— App | |— README.md | |— compose.yaml (anything with
 containers, Paavo) | |— project.env (anything with project and container level configurations, Paavo) | |
 |— backend-tests (Setup, Paavo) | | |— Dockerfile | | |— README.md | | |— tests | | |—
 test_auth_controller.py (Juho & Paavo) | | |— test_data_controller.py (Juho) | | | |— chat-engine
 (Paavo) | | |— Dockerfile | | |— README.md | | |— _compose.yaml | | |— agent_app.py | | |—
 agent_manager.py | | |— app.py | | |— autoloading_uml.py | | |— chat_app.py | | |—
 chat_manager_with_tools.py | | |— file_app.py | | |— diagrams | | |— utils | | |— **init.py** | | |—
 db_calls.py | | |— helpers.py | | |— tools.py | | | |— client (Paavo) | | |— Dockerfile | | |—
 README.md | | |— docker | | |— src | | | |— app.css | | | |— app.html | | | |— hooks.server.js
 | | | |— lib | | | |— apis | | | | |— data-api.js | | | |— assets | | | | |— image12.jpg | |
 | | | |— image3.png | | | |— components | | | | |— ChatBot.svelte | | | | |—
 ChatView1.svelte | | | | |— ChatView2.svelte | | | | |— ChatView3.svelte | | | | |—
 ChatView4.svelte | | | | |— PriceCards.svelte | | | | |— Tabs.svelte | | | | |— layout | | | |
 |— Clock.svelte | | | | |— Footer.svelte | | | | |— Header.svelte | | | | |— User.svelte | | |
 | |— states | | | | |— usePricesState.svelte.js | | | | |— userState.svelte.js | | | | |— utils | |
 | | |— clock.js | | | | |— date-helpers.js | | | | |— stats-helpers.js | | | |— routes | | | |—
 +layout.js | | | |— +layout.server.js | | | |— +layout.svelte | | | |— +page.svelte | | | |— api | | |
 | |— devchat | | | |— +server.js | | | |— auth | | | | |— [action] | | | |— +page.js | | | |
 |— +page.server.js | | | | |— +page.svelte | | | |— chat | | | | |— +page.svelte | | | |— epc | |
 | | |— +page.server.js | | | | |— +page.svelte | | | |— logout | | | | |— +page.js | | | |—
 +page.server.js | | | | |— +page.svelte | | | |— price | | | | |— +page.server.js | | | | |—
 +page.svelte | | | | |— send | | | | |— +page.server.js | | | | |— +page.svelte | | | |— static | | |—
 favicon.png | | | |— data-preparation (Paavo) | | | |— README.md | | | |— scripts | | | |— Dockerfile |
 | | | |— README.md | | | |— clean_porssisahko.py | | | |— populate_porssisahko.py | | |—
 retrieve_porssisahko_update.sh | | | |— database-migrations (Paavo) | | | |— V1__users.sql | | |—
 V2__porssisahko.sql | | | |— V3__timezone.sql | | | |— V4__users_add_role.sql | | |—
 V5__porssisahko_load_entries.sql | | | |— V6__users_add_isverified.sql | | | |— None (bad version naming --
 accidentally missed V7) | | | |— V8__extension_vector.sql | | | |— V9__code.sql | | |—
 V10__code_constraint.sql | | | |— V11__documents.sql | | | |— V12__files.sql | | | |— e2e-tests (Setup,
 Paavo) | | | |— Dockerfile | | | |— tests | | | |— frontend.spec.js | | | |— python-server (Juho & Paavo)
 | | | |— Dockerfile | | | |— README.md | | | |— main.py (Juho & Paavo) | | | |— requirements.txt | |
 |— config | | | |— **init.py** | | | |— secrets.py | | | |— controllers | | | |— auth_controller.py (Juho
 & Paavo) | | | |— data_controller.py (Juho) | | | |— ext_apis | | | |— ext_apis.py (Juho) | | |—
 models | | | |— custom_exception.py (Juho) | | | |— data_model.py (Juho) | | | |— user_model.py
 (Paavo) | | | |— repositories | | | |— porssisahko_repository.py (Paavo) | | | |— user_repository.py
 (Paavo) | | | |— scheduled_tasks | | | |— porssisahko_scheduler.py (Paavo) | | | |— services | | | |—
 auth_service.py (Paavo) | | | |— data_service.py (Juho) | | | |— utils | | | |— email_tools.py (Paavo) | |
 |— porssisahko_service_tools.py (Juho) | | | |— porssisahko_tools.py (Paavo) | | |—
 |— Documents |— README.md |— backend_design.md |— openapi_endpoint_descriptions.md
 |— project_description.md |— project_directory_structure.txt |— api_definitions |— openapi.json
 |— README.md |— diagrams |— sources |— authentication_call_sequence_diagram.wsd |—
 authentication_class_diagram.wsd |— authentication_use_case.wsd |—

data_access_call_sequence_diagram.wsd |— llm_retrieval.wsd |— services_diagram.wsd |—
tool_calling.wsd |— use_case.wsd

Notebooks

Additionally, the project/developer chat's retrieval mechanism requires some amount of parsing/cleaning/loading (all project code and documents), which is done offline using scripts and [document_loading.ipynb](#) inside [Eprice/Notebooks/](#). These are at least in some parts based on Paavo's (heh, me in 3rd person...) other previous and contemporary projects/works. Not everything is included in this repo, but will be later made available in <https://github.com/PaavoReinikka>.

To aid in the documentation of the project, there is also a UML diagram generator dashboard in [Eprice/Notebooks/](#) (using PlantUML syntax). It was written with Python (see Notebooks README for details and instructions).

Developer chat

The developer chat is based on OpenAI's gtp-4o-mini, which is basically free for research (and such) purposes. There are also a lot of open-source generative text models (chat and completion) in HF, and also good datasets for fine-tuning. Some of the experiments, with various open models, during this project will eventually be published in <https://github.com/PaavoReinikka>.

The embedding model used here, is open-source from HuggingFace. There are many good models available at HF, and there is a leader board for embedding models, which is a good place to start looking (<https://huggingface.co/spaces/mteb/leaderboard>).

Documentation

Most of the documentation was written by Paavo Reinikka, with some help from Juho Ahopelto, and with a lot of help from Copilot.