

Eduard Hvižd'ak

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EDUCATION

Masaryk University	Expected graduation 2026
Bachelor's Program: Computer Science	Brno, Czechia
Sobrance Gymnasium	Graduated 2023
Maturita – Mathematics, Computer Science, Slovak Language, English Language	Sobrance, Slovakia

EXPERIENCE

OneBond	2025 – Present
AI Developer	Czechia
- Designed, developed, and deployed the entire backend architecture for FairCity (Public Government contracts AI analysis platform) and implemented AI functionalities for EmaAI (Business intelligence and AI-agent platform) - Architected and implemented a multi-agent AI orchestration pipeline performing autonomous public contract analysis, integrating PDF parsing, OCR, web search, web scraping, fact-checking and summarization. - Developed a custom RAG pipeline using LangChain, PostgreSQL, and VoyageAI embeddings to enable semantic search and context-based LLM reasoning. - Created asynchronous job queues to categorize millions of government contracts using embedding models in parallel, optimizing throughput and resource utilization. - Built an AI reliability layer (fact-checker & fixer agents) ensuring factual accuracy and structured outputs in multi-step agent workflows. - Deployed a FastAPI microservices on Hetzner Cloud Linux server for high-performance text extraction from PDFs, text processing and integrated it with the main orchestrator. Which reduced extraction times and handled thousands of concurrent requests efficiently. - Created an interactive node graph to visualize semantic similarity between government contracts, transforming abstract vector data into an intuitive discovery tool that allows users to visually explore related tenders beyond simple keyword matching. - Created a prompt management and cost-tracking system, enabling custom persona-based generation and real-time API expense monitoring. - Developed an AI pipeline that automatically extracts item prices, quantities, and descriptions from unstructured government contract PDFs, creating a searchable database. This allowed users to perform specific items searches, apply unit cost and quantity filters across millions of contracts.	
CZS (Centrum zahraniční spolupráce), Masaryk University	2025 – Present
AI Developer	Czechia
- Worked with the International Cooperation Center (CZS MU) to develop AI Chatbot for answering student questions regarding Erasmus exchanges, international mobility documentation and general questions - Built multi-stage RAG system for university documents, combining semantic FAQ matching, vector search (OpenSearch), BM25, MMR, LLM reranking, and fallback mechanisms for low-confidence answers. - Developed FastAPI backend with asynchronous endpoints , session management, user feedback, dynamic suggestions and conversation logging. - Engineered text chunking, re-scraping CRON jobs, contextual chunk generation, metadata filters, synthetic FAQ generation, and embedding pipelines using Voyage AI for large-scale unstructured content. - Managed full deployment on Linux servers with systemd, Gunicorn/Uvicorn, and environment management.	

- Worked on the development of an **AI chatbot** for **Czech and Slovak municipalities** using **LangChain** and **OpenAI API**
- Programmed **an internal AI chatbot** for working with internal documentation using semantic search.
- Developed an **AI agent** for **automatically filling out forms** using internal data.
- Leveraged vector-based search (**PGVector**) and relational databases (**PostgreSQL**) to support **scalable** knowledge management.

EDUC Alliance (European Digital University Alliance)

2024 – 2025

*Think Tank Member & Programmer**Europe*

- **Developed** and **fine-tuned** an **AI chatbot** tailored to the needs of the digital campus, ensuring more accurate user query responses; worked with files and navigated the digital campus system.
- Led a **team** working on a **digital campus** project serving over **200,000 students** across **10 European universities**
- Managed **collaboration** and **communication** with partner universities and state institutions regarding **GDPR** and **AI resolutions**; led consultations on chatbot functionalities over various **university systems**.
- Implemented features for **document handling** and responding to student inquiries regarding **internships, job positions**, and related **opportunities** offered by universities.

CERTIFICATES, SKILLS, AND INTERESTS

- **Programming languages:** Python, C, Haskell, PHP, SQL, JavaScript,
- **Skills:** LangChain, RAG, LLM, React, REST APIs, FastAPI, Gunicorn, Uvicorn, Prompt Engineering, PostgreSQL, SQLite Vector Databases, ChromaDB, Pandas, NumPy, RegEx, Markdown Processing, OpenSearch ; Software: GitHub, UNIX, Docker, Supabase
- **Languages:** Slovak - Native, Czech - Fluent, English - C2, German - B2
- **Interests:** reading, travelling, programming, AI