Péter Szabó

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WORK EXPERIENCE

Recomp Informatikai Zrt.: Software Developer Intern (Part-Time)   07/2024 – Present
- Rebuilding a legacy attorney management system using **React**, **Next.js**, and **Tailwind CSS**, with testing implemented in **Jest** and **CI/CD pipelines** are managed through **GitLab**.
- Developing a real-time **AI**-based chatbot using **Generative AI** components, powered by **OpenAI's** real-time API and Eleven Labs, designed for integration with a Unitree Go2 EDU robot for voice-activated interaction and physical response synchronization.
- Updated legacy Delphi code to align with modern programming standards, enhancing code maintainability and performance.

PROJECTS

ATM Cash Forecasting (BSc Thesis)
- Developed a 4-semester **machine learning** pipeline predicting ATM cash depletion risk using GRU/LSTM and traditional models.
- Achieved up to 34% MAE reduction and **0.95 R^2** with optimized feature engineering, seasonality, and lag structures.
- Compared neural and statistical models across horizons; results support real-world use in refill strategy planning.

Risk Analysis with BRFSS Data
- Designed a LightGBM-based classifier to detect high-risk alcohol consumption patterns.
- Achieved **91% recall** on imbalanced real-world health survey data.

Wizarding World Management System
- Developed a C# and Angular application with **SOLID** principles, Entity Framework Core, and RESTful architecture.
- Implemented async updates via SignalR and achieved high backend test coverage using NUnit and Moq.

EDUCATION

University of Óbuda||Budapest, Hungary   09/2022 – 02/2026
B.S. Software Engineering, Software Design and Development
- Current **GPA: 8.2 / 10** (based on 6 completed semesters out of 7)
- Thesis project: machine learning – based ATM cash level forecasting system.
- In my last & upcoming semester I plan to present my work at a national **Student Research Conference** and aim to publish it in a peer-reviewed (**IEEE**) academic venue.

INTERESTS AND PURSUITS

- After 4 semesters of hands-on machine learning development, I'm now seeking opportunities to broaden my impact by combining technical depth with project ownership, collaborative problem-solving, and exposure to international innovation environments.
- I value adaptability and diverse environments — currently based in **San Sebastián** - Spain, and **Budapest**, - Hungary. (Relocation is fully possible for the right opportunity.)

SKILLS

- **Languages & Frameworks**: Python, JavaScript/TypeScript (React, Next.js), C#, SQL, C++, HTML/CSS
- **ML & Data Tools**: scikit-learn, TensorFlow, Keras, LightGBM, Pandas, NumPy, Matplotlib
- **Backend & APIs:** .NET Core, REST APIs, GitHub Actions, GitLab CI, JWT Auth
- **Concepts:** Time series forecasting, Feature engineering, Model evaluation, Agile, Software testing
- **Project & Team Collaboration:** Agile & Scrum methodologies, cross-functional teamwork