Árpád Goretity

Software Architect, Data Scientist

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WORK EXPERIENCE

Lead Bioinformatics Scientist

Medipredict Ltd.

Dec 2019 - Present

- Designed and implemented internal tools in Python and Rust for microbiome and metabolomics analysis
- Explored data using Pandas and Seaborn
- Built 2 disease prediction models in Scikit-learn
- Automated 2 document generation tasks using Typst
- Advised and mentored 2 junior team members
- Mediated between microbiome researchers, medical doctors, software engineers, and the DevOps team

Data Platform Engineer

PrivátDoktor (S+H Portfolio PLC)

Sept 2020 - Present

- Trained and deployed ML models for a medical decision support system: analyzed ECG, PPG, blood glucose, and blood pressure data using SciPy
- Improved performance of existing ECG signal processing pipeline with Rust and WASM
- Designed normalized database for training data in SQL Alchemy, SQLite, and PostgreSQL

Site Reliability Engineer

NumberEight Technologies Ltd.

May 2022 - June 2022

- Migrated existing services to Terraform and K8s
- Deployed Google Managed Prometheus
- Created a containerized, reproducible development environment for future SREs

iOS Application Developer

Freelancer @ Curl (UK), OTP Group, DBIT, Codie (HU)

June 2012 - Aug 2018

- Maintained and refactored large, mixed Swift and Objective-C code bases (Curl, iCsekk, Codie)
- Implemented client-side business logic involving local data storage, networking, and cryptography
- Fixed a critical security vulnerability in iCsekk

LANGUAGES

English (C2) | French (C1) | Hungarian | Italian

EDUCATION

MSc in Data Science

Università degli Studi di Padova, Dip. di Matematica

Sept 2018 - Jul 2020

- Thesis: Towards Personalized Disease Risk Prediction from Metagenome Analysis of the Microbiome
- Qualification: 110 / 110, Cum Laude

BSc in Bionic Engineering

Pázmány Péter Catholic University (PPCU FITB)

Sept 2013 - Dec 2016

- Thesis: Design and FPGA Implementation of a Protein Structure Comparison Method Based on Alignment of Backbone Conformations
- Qualification: 5 / 5 Excellent

SKILLS

Rust | Python | C++ | Swift | Haskell | SQLite | Postgres | TypeScript | Unix shell | Git | DDD | Software design | Docker | AVR µC | FPGA | Statistics | Data analysis | LaTeX | Typst | Leadership and mentoring | Public speaking

PROJECTS

Parsel

Compilers, Parsing, Macros

- Automatically generate a parser from an AST specification, without any mapping boilerplate

NanoSQL

Databases, ORMs

- Strongly-typed, very lightweight data mapper for SQLite and Rust

SteelSafe

Cryptography, Security

- TUI password manager using modern cryptography (Argon2id and XChaCha20-Poly1305)