

Árpád Goreity

Systems Software Engineer



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WORK EXPERIENCE

Lead Software Engineer (Bioinformatics)

Medipredict Ltd.

Dec 2019 - Present

- Designed and implemented tools in Rust and Python for biomedical data analysis and process automation
- Re-implemented research-grade software in Rust for production use; optimized memory use and runtime
- Trained and deployed ML models for disease prediction using scikit-learn and Docker
- Co-designed microservice communication architecture based on AWS S3 with platform engineering team
- Advised and mentored 2 junior team members
- Hosted internal seminars on software engineering best practices

Data Platform Engineer

PrivátDoktor (S+H Informatikai Zrt.)

Sept 2020 - Present

- Improved performance of existing signal processing (ECG analysis) pipeline with Rust and WASM
- Designed normalized database for training data using SQLAlchemy, SQLite, and PostgreSQL
- Integrated WASM components into Node+TypeScript backend
- Created internal tool using iced-rs for sending marketing and transactional emails

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

- Implemented and refactored large, mixed-language (Swift/Objective-C) code bases involving local data storage, networking, and cryptography
- Fixed a critical security vulnerability in iCsekk

FLOSS 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)

SKILLS

Rust Python C++ Swift Haskell SQLite

Postgres TypeScript Unix shell Git DDD

Software design Docker AVR μ C FPGA

Statistics Data analysis LaTeX Typst

Leadership and mentoring Public speaking

EDUCATION

MSc in Data Science

Università degli Studi di Padova, Dip. di Matematica

Sept 2018 - July 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