

# 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 µC

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