Árpád Goretity

Software Architect, Data Scientist

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📍 Budapest, Hungary

in h2co3 ↗

○ H2CO3 ↗

🌐 goretity.com ↗

WORK EXPERIENCE

Lead Bioinformatics Scientist

Medipredict Ltd.

Dec 2019 - Present

- Design and implement custom internal tools for microbiome and metabolomics analysis
- Explore and visualize data, perform statistical analyses for disease risk prediction
- Automate manual tasks, streamline work of scientists
- Mediate between microbiome researchers, medical doctors, software engineers, and the DevOps team
- Advise and mentor interns and junior team members

Data Platform Engineer

PrivátDoktor (S+H Portfolio PLC)

Sep 2020 - Present

- Train and deploy custom machine learning models for a telemedicine decision support system
- Optimize performance of existing data analysis pipelines (e.g. ECG and PPG signal processing)
- Introduce domain-driven design (DDD) and other best practices into software engineering team

Site Reliability Engineer

NumberEight Technologies Ltd.

May 2022 - Jun 2022

- Migrate existing services to Terraform and K8s
- Deploy Google Managed Prometheus
- Create containerized, reproducible development environment for future SREs

iOS Application Developer

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

Jun 2012 - Aug 2018

- Maintain and refactor large, mixed Swift/Objective-C code bases
- Implement client-side business logic involving local data storage, networking, and cryptography
- Work with UX designers to build ergonomic and intuitive graphical user interfaces

LANGUAGES

English (C2) French (C1) Hungarian Italian

EDUCATION

MSc in Data Science

Università degli Studi di Padova, Dip. di Matematica

Sep 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)

Sep 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 parsers from AST specifications, without mapping boilerplate

NanoSQL ↗

Databases, ORMs

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

SteelSafe ↗

Cryptography, Security

- Ergonomic TUI password manager using modern cryptography primitives and robust software engineering practice