

Árpád Goretity

Software Architect, Data Scientist

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Education

- Pázmány Péter Catholic University, Faculty of Information Technology and Bionics
B.Sc. in Molecular Bionic Engineering — 2013–2016
Thesis: *Design and FPGA Implementation of a Protein Structure Comparison Method Based on Alignment of Backbone Conformations*
Qualification: *Excellent*
- Università degli Studi di Padova, Dipartimento di Matematica “Tullio Levi-Civita”
M.Sc. in Data Science — 2018–2020
Thesis: *Towards Personalized Disease Risk Prediction from Metagenome Analysis of the Microbiome*
Qualification: *110 / 110 Cum Laude*

Programming Experience — 17 years

- C, C++, Objective-C — 11 years, *highly proficient*
- Rust — 5 years, *highly proficient*
- Python — 5 years, *highly proficient*
- Some exposure to Swift, Haskell, R, Matlab, JavaScript, and VHDL

Software Projects (personal and professional)

- *Sparkling* — a modern, lightweight, extensible, embeddable scripting language. Compiler, VM, and standard library implemented from scratch.
- *Avocado* — a strongly-typed, schemaful, high-performance client library for MongoDB, written in Rust, suitable for Domain-Driven Design.
- *iCsekk @ SciApps.io, Díjbeszedő Holding Zrt.* — iCsekk by Magyar Posta Zrt. is an application for paying utility bills in Hungary. As a contractor, I have completely rewritten the core communication layer of the iOS app, fixing several high-severity security vulnerabilities in the process.

Other Skills

- Languages: **English** (Cambridge C2), **French** (C1), **Italian** (B1), **Hungarian** (native)
- Unix shell scripting; SCM using Git
- Technical writing using L^AT_EX
- Teaching — 2 semesters of “Introduction to Programming in C++” and 1 semester of “Nonlinear Dynamical Systems” at PPCU
- Regular speaker at meetups: delivered talks at Budapest Science Meetup, NSBudapest, Budapest Swift Meetup, Prezi Tech Talks Budapest, and Swift London.