Michal Ziemski

Research SoftwareEngineer

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Location:	Zurich, Switzerland
Date of birth:	23. October 1987
Nationality:	Swiss, Polish

ABOUT ME

Software engineer with a background in biochemistry and experience building reliable software for complex scientific workflows. Skilled in Python development, integration of scientific software components, and cross-team technical leadership, with a track record of translating researcher needs into scalable, maintainable systems in data-intensive environments.

SKILLS

Technologies & frameworks
Django, Docker, Kubernetes, Terraform, AWS, ML tooling

Programming languages
Primary: Python, JavaScript
Familiar with: Rust, Go

Languages

English	Professional
German	Good command
Polish	Native

ONLINE PRESENCE

ziemskimichal

misialq

EDUCATION

Data Science Bootcamp
Propulsion Academy, Zürich
01/2018 - 03/2018

Ph.D. in Biophysics
ETH Zürich
01/2013 - 01/2018

M.Sc. in Biotechnology
University of Silesia, Katowice, Poland
10/2009 - 06/2011

WORK EXPERIENCE

Research Software Engineer
09/2020 - present
ETH Zürich

- *Lead engineering of production-grade scientific software projects, mentoring 8+ junior developers and coordinating contributions across multiple stakeholders.*
- *Drive integration of metagenomics workflows into the QIIME 2 ecosystem, improving interoperability, reproducibility, and usability across shared analysis platforms.*
- *Build and maintain 10+ Python plugins and framework components for QIIME 2, enabling scalable and reproducible scientific data processing for a broad international user community.*
- *Establish engineering standards including version control, code review, testing, and continuous integration across 15+ repositories, improving software quality, maintainability, and development velocity.*
- *Develop structured metadata, documentation retrieval, and provenance-aware tooling to improve discoverability, developer productivity, and interaction with complex scientific workflows.*

AI Software Engineer
06/2018 - 08/2020
OTO Systems

- *Built Python services for real-time ML inference using TensorFlow Serving and gRPC, supporting low-latency production workflows.*
- *Designed and deployed backend APIs with Django REST Framework to support operational product workflows.*
- *Maintained and extended applications written using Go, JavaScript and Electron.*
- *Collaborated closely with data scientists, ML engineers, and product managers to deliver production features in an agile environment.*
- *Owned cloud deployment workflows on AWS using Docker, Kubernetes, Terraform, and CI/CD pipelines.*

Doctoral Researcher
01/2013 - 03/2018
ETH Zürich

- *Developed computational pipelines for bioinformatics and proteomics data analysis.*
- *Applied statistical, bioinformatics, and experimental methods to study protein function and evolutionary relationships.*

TECHNICAL LEADERSHIP

AI Enablement for QIIME 2
Lead development of AI-enablement tooling, including an MCP server for structured plugin metadata and retrieval-based documentation workflows, improving discovery and usability of QIIME 2 tools.

GitHub: https://github.com/bokulich-lab/rachis-mcp

Workflow Integration
Define reusable integration patterns for Python-based and analysis components across QIIME 2 distributions, improving interoperability, reproducibility, and maintainability.

Developer Enablement
Define agentic development patterns and reusable skills to help plugin authors implement, test, and document QIIME 2 functionality more consistently.

GitHub: https://github.com/misialq/rachis-claude-marketplace