Dominik Maszczyk

Senior Software Engineer

Copenhagen, Denmark

linkedin.com/in/dominik-maszczyk | github.com/Skitionek

Profile

Senior Software Engineer with 8+ years of experience building data-intensive platforms in the bioinformatics domain. I specialize in scalable data architectures and developer tooling, with strong ownership of production systems — including authoring the majority of a complex scientific platform. I bridge research and engineering by turning complex data workflows into reliable, maintainable systems.

Core Competencies

- Scalable data platforms (distributed systems, multi-database architectures)
- Bioinformatics and scientific software development
- Full-stack development (TypeScript, Python, Angular, React)
- Knowledge graphs and data modeling (Neo4j, ArangoDB)
- Cloud infrastructure (Kubernetes, Azure, Google Cloud)
- Developer tooling and workflow optimization (Nextflow ecosystem)

Professional Experience

Senior Software Engineer   *DTU Biosustain*
Mar 2025 – Present, Copenhagen

- Designed systems for unified data storage, access control, and provenance tracking.
- Improved reproducibility of research workflows through data architecture design.
- Maintained and scaled cloud applications on Azure.
- Introduced CI/CD pipelines improving reliability and deployment quality.

Software Engineer   *Novo Nordisk Foundation Center for Biosustainability*
Jun 2022 – Dec 2024

- Core contributor to Lifelike platform.
- Authored **75% of the codebase** across frontend, backend, and services.
- Built full-stack system (Angular + TypeScript, Python + Flask).
- Designed integrations across PostgreSQL, Neo4j, ArangoDB, Redis, and Elasticsearch.
- Developed data processing and LLM-based services supporting scientific workflows.

Software Engineer (On-site)   *UC San Diego*
Feb 2022 – May 2022

- Collaborated with distributed teams on platform development and integration.

Research Assistant → Software Engineer   *DTU Biosustain*
Oct 2016 – May 2022

- Developed full-stack features for synthetic biology platform.
- Led infrastructure evolution:
  - Docker Compose → Kubernetes migration

- DigitalOcean → Google Cloud transition
- Maintained production systems supporting research workflows.

Open Source

nf-mapper — Nextflow tooling

- Improves structure and maintainability of workflow pipelines.
- Focused on developer experience and workflow introspection.

More projects: github.com/Skitionek

Publications

- **PREFER: An Ontology for the PREcision FERmentation Community**
- **Reactome modified for tracing (ArangoDB version)**
- **Lifelike v0.98.1**

Education

M.Sc. Electrical and Electronics Engineering (Double Degree)
KAIST & Technical University of Denmark (DTU)   2016 – 2018

B.Sc. Electrical Engineering
Gdańsk University of Technology & Karlsruhe Institute of Technology   2012 – 2016

Languages

English (Professional), Polish (Native)