Stephan Heijl

Al Scientist Specializing in Protein Engineering

Professional Summary

Experienced Al Scientist with extensive expertise in protein engineering, deep learning, and interdisciplinary collaboration. Demonstrated track record of leading innovative Al-driven solutions, particularly in representation learning of proteins. Founding member of Al department that is now the primary growth driver of Bio-Prodict.

Experience

Senior Data Scientist | Bio-Prodict | 2016-Present

- Scientifically directed the design, development, and deployment of large-scale deep learning systems for protein engineering, including language model-based pathogenicity prediction and protein engineering.
- Developed novel transformer-based architectures and innovative training paradigms, significantly improving prediction accuracy and interpretability for protein variant effects.
- Led interdisciplinary teams consisting of data scientists and bioinformaticians to innovate and validate novel Al methodologies.
- Extensive experience with LLMs for proteins and literature NLP, Graph Neural Nets for proteins and ligands (small molecules), 3D CNNs for structure representation.
- Actively presented research at scientific conferences, contributing to peer-reviewed publications, maintaining visibility and collaboration within the ML and bioinformatics community.
- Managed and mentored a team of 3-5 data scientists and supervised 10+ MSc and BSc students, focusing on collaborative research and development.

Commissioned Expert | HAN University of Applied Sciences | 2018-Present

 Evaluated students' graduation projects for conformity with industry standards, providing critical insights and guidance in bioinformatics applications. Professional collaboration with academic personnel.

Founder | Yuras | 2017

- Developed innovative machine learning tools focused on extracting and leveraging data-driven insights for legal professionals.
- Gained valuable experience in stakeholder communication, entrepreneurship, and innovation in traditional industries.

Education

- MSc Applied Data Science, graduated cum laude, HAN University of Applied Sciences (2025)
- BSc Bioinformatics, HAN University of Applied Sciences (2016)

Certifications

- Engineering Project Management (edX, 2021)
- Leadership Essentials for Engineers (edX, 2019)

Technical Skills

- Deep Learning: PyTorch, Transformers, Graph Neural Networks (GNN), CNNs, NLP
- Bioinformatics & Computational Biology: Protein engineering, protein mutation analysis, molecular structure modeling, bioinformatics pipelines
- Programming: Python (expert), Rust, HTML/CSS/JS, PHP
- DevOps & Cloud Computing: Kubernetes, Docker, CI/CD, Google Cloud Platform, SLURM
- Databases: PostgreSQL, MongoDB, Redis

Soft Skills

- Team Leadership, Interdisciplinary Collaboration, Scientific Communication, Project Management
- Languages: Dutch (native), English (near-native), German (basic)

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