Felix **Teufel**

PhD Student · Machine Learning
Copenhagen, Denmark
fteufel | felixteufel | Updated september 2023

Education

University of Copenhagen — *Copenhagen, Denmark*
Ph.D. Machine Learning — *Feb. 2022 - ongoing*
- Advisor: Ole Winther

ETH Zürich — *Basel, Switzerland*
M.Sc. Biotechnology — *Sep. 2018 - Jun 2021*
- **GPA:** 5.76/6 — **Graduated with distinction**
- **Lab Assistant** in the Bioprocess Laboratory (Sven Panke group)

University of Natural Resources and Life Sciences (BOKU) Vienna — *Vienna, Austria*
B.Sc. Food Science and Biotechnology — *Oct. 2015 - May 2018*
- **GPA:** 1.6/5 (1 = best) — **Graduated with distinction**
- **Teaching Assistant** for Biochemistry
- **Virginia Tech**, Blacksburg, VA, USA - represented Austria in a competition for student-founded startups *(Summer 2018)*

Work Experience

Novo Nordisk A/S — *Måløv, Denmark*
Industrial PhD Student — *Feb. 2022 - ongoing*
- AI & Digital Research

F. Hoffmann - La Roche AG — *Basel, Switzerland*
Intern in Pharma Technical Operations — *Aug. 2019 - Jun. 2020*
- Natural Language Processing of biopharmaceutical manufacturing data
- Developed productivity tools for Google Suite (Google Apps Script)

11er Nahrungsmittel GmbH — *Frastanz, Austria*
Summer intern in Research and Development — *Jun. 2015 - Sep. 2017*
- Developed chemometric models (PLS regression) for Near Infrared Spectrometry (NIR) analytics of foods

Research Experience

Selected publications

GraphPart: Homology partitioning for biological sequence analysis
Preprint — *2023*
F. Teufel, M. H. Gíslason, J.J. A. Armenteros, A. R. Johansen, O. Winther, H. Nielsen

Deorphanizing Peptides Using Structure Prediction
Journal of Chemical Information and Modeling — *2023*
F. Teufel, J. C. Refsgaard, M. A. Kasimova, K. Deibler, C.T. Madsen, C. Stahlhut, M. Grønborg, O. Winther, D. Madsen

Combining mass spectrometry and machine learning to discover bioactive peptides
Nature Communications — *2022*
C.T. Madsen, J. C. Refsgaard, F. Teufel et al.

SignalP 6.0 predicts all five types of signal peptides using protein language models
Nature Biotechnology — *2022*
F. Teufel, J.J. A. Armenteros, A. R. Johansen, M. H. Gíslason, S. I. Pihl, K. D. Tsirigos, O. Winther, S. Brunak, G. v. Heijne, H. Nielsen

Projects

Predicting stem cell states from single cell transcriptomics data — *Stanford, CA, USA - remote (COVID)*
Newman Lab, Department of Biomedical Data Science, Stanford University — *Mar. 2021 - Feb. 2022*
- Developing models to predict stem cell states reliably in multiple tissues

Electrobiochemical Acrylamide Biosensors *Vienna, Austria*

Ludwig Lab, BOKU Vienna *Jun. 2018 - Aug. 2018*

- Investigated the reproducibility of previously published biosensor designs for acrylamide detection
- Developed a GUI for biosensor readout

Honors & Awards

Competitions

2020 **Highlight Project for Economic Impact**, VersusVirus Hackathon *Zürich, Switzerland*

2019 **First Place**, Zurich Case Competition 2019 *Zürich, Switzerland*

2018 **Finalist**, Virginia Tech Global Entrepreneur Challenge 2018 *Blacksburg, VA, USA*

2018 **Crowd Champion**, Entrepreneurship Avenue Pitch Competition *Vienna, Austria*

Scholarships

2015-2018 **Merit-based Scholarship**, BOKU Vienna *Vienna, Austria*

Invited Talks

2023 **Inter-Academy Workshop on Membrane Protein Structure and Folding** *Stockholm, Sweden*
DeepTMHMM predicts alpha and beta transmembrane proteins using deep neural networks

2021 **Novozymes A/S** *Copenhagen, Denmark*
Predicting signal peptides using protein LMs

Extracurricular Activities

PhD and Postdoc Fellowship Committee of Novo Nordisk *Copenhagen, Denmark*

Committee Member *Nov. 2022 - ongoing*

- Organize workshops and events for ∼80 PhD students and postdocs in the organization

Biotechnology Students Association of ETH Zürich *Basel, Switzerland*

Vice President *Feb. 2019 - Sep. 2020*

- Responsible for industry relations
- Student delegate in the appointment committee for new professorships
- Representative in department commissions

Graduate Consulting Club of ETH Zürich *Zürich, Switzerland*

Team Leader *Mar. 2019 - May 2021*

- Led a team of 5 student consultants on a market positioning project
- Consulted a computer vision / OCR startup on their market entry strategy in Switzerland

Teaching

Supervision & Co-Supervision *University of Copenhagen & DTU*

5 M.Sc. theses and 4 course projects *2021 - ongoing*

Biological Sequence Analysis *University of Copenhagen*

M.Sc. course, TA for practicals on HMMs and motif discovery algorithms *2022*

Reviewing

2023	**Journal of Chemical Information and Modeling**	*Reviewer*
2023	**Machine Learning in Structural Biology Workshop at NeurIPS**	*Reviewer*
2023	**NeurIPS Datasets & Benchmarks,** Neural Information Processing Systems	*Reviewer*
2023	**NeurIPS,** Neural Information Processing Systems	*Reviewer*
2023	**Nature Biotechnology**	*Reviewer*
2023	**Proteomics**	*Reviewer*
2022	**Bioinformatics**	*Reviewer*
2022	**ICLR 2023,** International Conference on Learning Representations	*Reviewer*
2022	**PeerJ**	*Reviewer*
2022	**Scientific Reports**	*Reviewer*
2021	**Cell Reports**	*Assisted Review*
2021	**iScience**	*Assisted Review*
2020	**ICLR 2021,** International Conference on Learning Representations	*Assisted Review*
2020	**AAAI 2021,** Association for the Advancement of Artificial Intelligence	*Assisted Review*

Skills

Languages	German/Swiss German (Native), English (C2), Spanish (B2), French (B1)
Programming Languages	Python, R, SQL, Google Apps Script
Tools	Linux, Google Cloud Platform, Git, Github
Analytical Techniques	Near Infrared Spectrometry, HPLC, Transcriptomics (Illumina), Differential Scanning Calorimetry, Voltammetry
Wet Lab	Microbiology, Cell culture, Cloning, Protein expression and purification (lab scale and pilot scale)