



Fabio J. Fehr

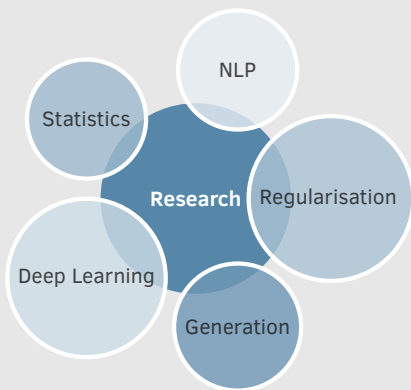
Research assistant at Idiap,
PhD candidate at EPFL

- 25/05/1996,
Swiss & South African
- fabio.fehr@idiap.ch
- LinkedIn Profile
- Research Profile

About me

I believe in honesty, humility and that kindness is the ultimate optimisation: free to give and invaluable to receive. I am passionate about research and think that the progress direction is more important than the progress magnitude. I am happiest with: rigorous mental stimulation, relaxing social interaction and regular physical exercise. For leisure, I enjoy spending time outside in nature: sunshine, sea and snowy mountains.

Interests



Languages

- English ● ● ● ● ●
- French ● ● ● ● ●
- Afrikaans ● ● ● ● ●
- German ● ● ● ● ●

Education

Tertiary: Postgraduate

- 2021 – 2024 **Doctor of Philosophy: Electrical Engineering** EPFL
Research in machine learning and natural language processing.
PhD Research EPFL
Combining Variational Bayesian nonparametric methods with deep attention-based models for representation learning.
- 2019 – 2020 **Masters: Advanced Analytics** UCT
Statistics specialisation and awarded SASA-NRF full bursary.
Masters Thesis UCT
A comprehensive comparison study of Gaussian processes and variational autoencoders for statistical shape modelling of 3D meshes.

Tertiary: Undergraduate

- 2015 – 2018 **Bachelors of Business Science: Analytics** UCT
Commerce degree with a specialisation in mathematics & statistics.
Honours Thesis (Distinction) UCT
Statistical machine learning techniques for classifying news articles. Presented at South African Statistical Association (SASA) 2019.

Experience

- 2021-2024 **Research Assistant** Idiap
Natural Language Processing and Deep Learning research.
- 2018 **Intern Machine Learning Engineer** DataProphet
Transfer learning for financial time-series data.
- 2017 - 2018 **Intern Data Scientist** Eighty20
Data visualisation dashboard for the water crisis in Cape Town.

Teaching

- 2021-2024 **Teaching Assistant** EPFL
Machine learning, Deep learning and NLP courses at EPFL.
- 2020-2024 **Engagement Tutor** 2U
Course Tutor: Business Analytics (UCT), Machine Learning (LSE).
- 2019 – 2020 **Subject Matter Expert** 2U
Course creation: Business Analytics (UCT), Machine Learning (LSE).
- 2017 – 2020 **Head Tutor: Statistics** UCT
Managing, coordination, tutoring and assistant lecturing.

Publications

PhD Research

- 2023 Nonparametric Variational Regularisation of Pretrained Transformers ArXiv 2023
- 2023 Learning to Abstract with Nonparametric Variational Information Bottleneck EMNLP 2023
- 2022 A VAE for Transformers with Nonparametric Variational Information Bottleneck ICLR 2023

Research collaborations

- 2022 HyperMixer: An MLP-based Low Cost Alternative to Transformers ACL 2023

References

- PhD supervisor** Idiap
Dr. James Henderson - james.henderson@idiap.ch
- MSc supervisors** UCT
Prof. Tinashe Mutsvangwa - tinashe.mutsvangwa@uct.ac.za
Mr. Allan Clark - allan.clark@uct.ac.za