Alexander Fengler

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EDUCATION

PhD. Cognitive Science
Brown University
Grad. Jan 2023
Thesis: Intersection of deep learning and Bayesian inference for science

MPhil. Statistics
Universita Bocconi
Grad. July 2017

MSc. Neuroeconomics
University Maastricht
Grad. July 2014

BSc. International Business
University Maastricht
Grad. 2012

SKILLS

Programming Languages:
Python, R

Packages and Tools:
PyTorch, JAX, PyMC, Numpy, Pandas, Git

Languages:
German (native), English (native), Italian (B2), Chinese (beginner)

COURSEWORK

Computational Statistics
Numerical Optimization
Probability
Bayesian Statistics

AWARDS

Tuition waiver, Universita Bocconi
Top 3%, University Maastricht
Brainstorm, Brown University

EXPERIENCE

Brown University June 2022 – present
Postdoctoral Researcher Providence, RI

- Received Brainstorm Fellowship to lead a team of software engineers to develop a marketable python package for friendly likelihood free inference.

PyMC Labs June 2021 – present
Principal Data Scientist Providence, RI

- Develop data analysis pipeline for fast Bayesian inference on live game-play data, using prominent computational cognitive models.
- Project combines deep learning libraries (JAX, PyTorch) with leading software for Bayesian Inference via Markov Chain Monte Carlo (PyMC). Written in Python.

Caltech June 2013 – May 2015
Research Assistant Pasadena, California

- Designed and wrote software (R, Matlab) for an experiment concerning consumer choice over multiple alternative items while eye gaze is tracked. Fully responsible for any data analysis.
- Designed smartphone based experiment sponsored by a large technology company to improve user-experience and recommender systems.

PROJECTS

HDDM
Python package for hierarchical Bayesian modeling. Specialized towards applications in computational cognitive science.

LANFactory
Brown University, Providence RI
Python package for training of neural networks from simulator data. Uses PyTorch and JAX deep learning frameworks.

SSMS
Brown University, Providence RI
Python package for fast simulation of large variety of sequential sampling models.