Miguel Fernandes

DATA SCIENTIST WITH THE GOAL TO EMPOWER PEOPLE THROUGH KNOWLEDGE

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03 January 1985

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AWARDS

Hans-Grisebach Award 2014
University of Freiburg

Outstanding dissertation in the field of biochemistry and molecular biology

CERTIFICATIONS

Machine Learning with Python — April 2020
Coursera

Databases and SQL for Data Science with Python — May 2021
Coursera

LANGUAGES

Portuguese Native	**English** Fluent
German Fluent	**French** Basic

HOBBIES

Reading, Football, Martial Arts, Biking, Cooking

Collaborator Open Neuroscience: https://open-neuroscience.com/

EXPERIENCED DATA SCIENTIST FASCINATED BY THE ANALYSIS OF COMPLEX DATASETS TO GAIN VALUABLE INSIGHTS

- **Capable of gaining actionable knowledge and learn new methods.**
- **Committed team player with strong leadership skills, who thrives on cross-functional teams.**
- **Natural communicator capable of distilling complex information to crucial points and present to broad audiences.**

SKILLS

Python	Bash
ImageJ/FIJI	AI
Git	Life sciences
Visualization	Machine learning
Computer Vision	Molecular Biology

PROFESSIONAL EXPERIENCE

DZNE (Deutsches Zentrum für Neurodegenerative Erkrankungen) — (March 2021 - Present)
Head of the Image and Data Analysis Facility (IDAF)/Data Scientist

- Managing a team of Data Scientists (implementing the strategy for the team, communication, budget management)
- Data Science (artificial Intelligence, deep learning, machine learning, statistical analysis)
- Drug development (**image-based profiling** with CellProfiler)
- Development of **machine learning algorithms** for predicting drug activity, toxicity, or mechanism of action (high-throughput screening data analysis)
- Software Development (Python, ImageJ/Fiji macros for image analysis)
- Consulting and teaching of data analysis and visualization techniques
- **Quantitative Microscopy** (automated object detection in microscopy images)

Max Planck Institute of Neurobiology — (September 2013 - February 2021)
Researcher/Data Scientist

- Development of computational approaches (analysis and visualization of **transcriptomics datasets**)
- Employment and development of diverse machine learning algorithms to imaging and unstructured numeric data (supervised and unsupervised learning algorithms)
- Establishment and maintenance of **advanced imaging technologies** for neuronal activity recording and manipulation
- High-resolution object tracking using **computer vision** (e.g. OpenCV)
- Analysis of 3D/4D biological data (Python, Bash, CMTK, ANTs, and Image J Macro scripts)

EDUCATION

University of Freiburg — (April 2009 - August 2013)
PhD Neuroscience, Biology

- Confocal imaging of in vivo and in vitro brain samples
- Development of **molecular and transgenic** tools for neural circuit dissection (Pharmacogenetic ablation of cells, large genomic and RNA data analysis, DNA/RNA handling, PCR, and molecular cloning)
- Construction of behavioral setups and analysis of imaging and time-series data.
- **Immunohistochemistry and Fluorescent in situ Hybridization techniques**

University of Porto — (September 2003 - September 2008)
Licentiate (Masters equivalent) Biology