Miguel Fernandes

DATA SCIENTIST WITH THE GOAL TO EMPOWER PEOPLE THROUGH KNOWLEDGE

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03 January 1985

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SKILLS

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

AWARDS

Hans-Grisebach Award 2014
University of Freiburg

Outstanding dissertation in the field of biochemistry and molecular biology

CERTIFICATIONS

Machine Learning with Python
Coursera
April 2020

Databases and SQL for Data Science with Python
Coursera
May 2021

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 with a strong ability to distill complex information to crucial points and present to broad audiences.**

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 for lead compounds discovery 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
(October 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 behavioral tracking (video recording and object tracking using computer vision, e.g. OpenCV)
- Analysis of 3D/4D biological data (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 transgenetic 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
(October 2003 - October 2008)
Licentiate (Masters equivalent) Biology

LANGUAGES

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

HOBBIES

Reading, Football, Martial Arts, Biking, Cooking

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