FRANZ DAVID SCHAEFER

Data Scientist | Product Development | Strategic Analytics
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WORK & RESEARCH EXPERIENCE

Data Scientist | Proa (Energy Forecasting) February 2023 – Present

- Independently planned, developed and delivered wind forecasting model within 6 months, securing a new product line and expanding into a $7bn domestic market.
- Analysed AEMO FPP regulations by reverse-engineering pricing mechanisms, creating financial models with 99.9% accuracy allowing for strategic decision-making.
- Iteratively implemented improvements and automated quality checks to existing solar forecasting system, increasing accuracy by 3% and saving $25k-35k annually in monitoring.
- Reformed SCADA data pipelines, reducing technical debt and integration time from weeks to days, enabling onboarding of 12 new accounts within 2024.
- Led training sessions for 15 clients accounting for over 10GW of grid capacity, retaining client confidence during complex regulatory transition period.

Data Scientist | Brainlab AG July 2021 – February 2023

- Analysed oncological radiotherapy registry of over 3000 patients using multivariate statistical analysis, paving the way for AI treatment planning assistance.
- Planned the architecture to implement CNN for dose calculation, contributing to 28% faster planning.
- Developed and maintained accessible data analysis tools, used regularly throughout 2 departments.

Project Engineer | Brainlab AG January 2021 - July 2021

- Managed the release of a regulatory-compliant data sharing tool, increasing clinic opt-in rate by 30%.
- Organised and led data quality audits, at 9 major hospitals across 3 countries.
- Developed and maintained exploratory dashboard using PowerBi , used by 4 teams within the department.

Research Scientist | University Hospital Mannheim March 2019 - January 2021

- Developed machine learning model to personalise and optimise radiotherapy treatments.
- Built robust data pipelines to efficiently parse treatment plans and clinical outcomes from over 200GB of open source datasets, spanning over 400 patients.
- Trained autoencoders to extract key features, reducing required compute resources by 46%.
- Developed both predictive and prescriptive neural networks, using CUDA and tensorflow.
- Integrated model into existing planning software, with 71% of plans rated as improved by clinical experts.

Project Engineer | Heraeus April 2018 - October 2018

- Designed 3D temperature measurement modules for infrared emitters operating at 600°C.
- Integrated modules into QA procedures, improving fault detection by 20% and reducing recall costs by 3%.
- Optimised module design for scalable manufacturing and production implementation.

ACADEMIC ACHIEVEMENTS

Master of Science | University of Heidelberg 2018 - 2020
Computational physics, Neural Networks, Image Processing, Radiotherapy, Nuclear Medicine.

Research Exchange | Xi'an Jiaotong University 2017
Investigated acoustic emissions of shape-memory-alloys during repeated heat-stress cycling.

Bachelor of Science | University of Western Australia 2015 - 2017
Electrical Engineering, Quantum Optics, Astrophysics, Signal Processing.

SKILLS

Programming: Python, SQL, R, MATLAB, C++, C#
Machine Learning: TensorFlow, CUDA, Scikit-learn, Keras
Data & Visualization: Power BI, Tableau, Seaborn, Matplotlib, MongoDB
Cloud & DevOps: Azure, AWS, Docker, Git, Agile
Domain Expertise: DICOM, SCADA, Energy Trading, Medical Imaging

References available upon request. Please do not contact current employer without prior discussion.