Data Scientist

Roman Mannweiler – Master of Science Biophysics

romannweiler@gmail.com

Employee experience

Charité Universitätsmedizin Berlin, Berlin - Research fellow

10.2017 - 12.2020

Fully automated evaluation routine for blind analysis of large impedance spectroscopy datasets

Technologies: Python SciPy, NumPy, Pandas, Matplotlib

Modelling impedance spectroscopy data; 3D FEM simulation model for optimizing the impedance measurement of skin

Technologies: Comsol Multiphysics (AC/DC, Wave Optics, Electrochemistry)

Automatic extraction of geometric parameters from microscopy images

Technologies: ImageJ, WEKA Segmentation

Automated pdf document creation with Python

Technologies: FPDF, Python Pandas, SpaCy, Matplotlib

Carl Zeiss Meditec AG, Berlin **-** Working student

11.2015 - 03.2017

Improvement of the data analysis routine for UV-Vis spectroscopy of raw material

Technologies: Wolfram Mathematica, MS Excel

Paul-Drude-Institut für Festkörperelektronik (PDI), Berlin – Working student

07.2014 - 10.2015

Software development for Transmission Electron Microscopy image data acquisition

Technologies: Matrox Imaging Library; C++

Ginkgo Management Consulting GmbH, Hamburg - Working student

01.2014 - 05.2014

Back Office support

Deutsches Elektronen-Synchrotron (DESY), Hamburg - Working student

04.2011 - 12.2013

Conducting X-Ray and optical experiments and data analysis

Technologies: MS Excel, Python, Wolfram Mathematica

SKILLS

Data Science
Python
SciPy
Numpy
Pandas
Matplotlib
SpaCy
OriginLab
MS Access
MS Excel (VBA)

Image Analysis
Matrox Imaging Library
ImageJ (Macro)
MosaicSuite
Hough Transform
WEKA Segmentation

Statistics/Mathematics
GraphPad Prism
Wolfram Mathematica

Simulation
Comsol Multiphysics
PSF Generation
FitGiSAXS

Languages

German (native)
Russian (native)
English (excellent)
French (basic)

University

Technische Universität Berlin, Berlin – PhD student

10.2017 - now

Doctoral Thesis: “Understanding the role of Tight Junction Proteins in epidermal barrier formation by resolving the barrier composition via electrochemical impedance spectroscopy and finite element method simulation”

Humboldt-Universität zu Berlin, Berlin - Master of Science Biophysics

10.2014 - 09.2017

Project: 3D localization of particles via combination of optical simulation and image analysis

Technologies: ImageJ, MosaicSuite, Hough Transform, OriginLab, PSF Generator EPFL

Universität Hamburg, Hamburg - Bachelor of Science Physics

10.2010 - 05.2014

Project: X-Ray and optical analysis of thin films

Technologies: Wolfram Mathematica, OriginLab, FitGiSAXS