Kristian Eschenburg

keschenburg90@gmail.com | 949-510-0505 | Seattle, WA

Education

- PhD, Univ. of Washington
- BS, UCLA

Software / Tools

- Python, Matlab, R
- PyTorch
- DGL, torch-geometric
- HPC (SGE, Slurm)
- PostgreSQL
- AWS
- GIt

Skills

- ML / DL
- GNNs
- Object-oriented design
- Medical image processing
- Linear algebra
- Statistics
- Distributed computing
- Data structures and algorithms
- Unit testing

Links

- GitHub
- LinkedIn
- Technical Blog

Languages

- German (native)

Professional Data Science Experience

April 2022 – Present

Senior Data Scientist, Just-Evotec Biologics, Seattle WA

- Leading development of AI models for in-silico de novo antibody design using graph-based protein language models
- Building out functional-group specific analysis tools to expedite drug manufacturing processes
- Developed downstream protein purification visualization tool that reduced end-to-end analysis times by 2 weeks
- Organized migration of company-wide on-prem applications to AWS

June 2021 – April 2022

Data Scientist, CuriBio, Seattle WA

- Built AI models for predicting cell differentiation success rates from high-throughput microscopy imaging datasets
- Developed software for phenotypic analysis of engineered cardiac and skeletal myocyte contractility waveforms

April 2017 - June 2017

Software Engineering Intern, Phase Genomics, Seattle WA

- Contributed to the development of meta-genome clustering algorithms for Python-based software platform
- Learned and employed principles of test-driven software development
- Gained experience with cloud computing using AWS

June 2016 - Sep. 2016

Data Science Intern, PNNL Dep. of Energy, Richland WA

- Studied data structures related to dynamic graphs
- Analyzed dynamical systems of functional MRI to characterize coherent spatial patterns of brain activity
- Translated summer internship research into journal paper (see below)

Academic Research in Neuro/Computer Science

September 2014 – December 2021

PhD, Biomedical Engineering, University of Washington, Seattle WA

- Developed graph neural network deep learning approaches to segment the human cortex using functional and diffusion MRI (paper)
- Characterized local variations in the topography of functional brain connectivity to explore inter-regional brain organization patterns.
- Studied dynamics of the brain activity using novel modal decomposition methods in resting-state fMRI (paper)
- Fellowship: ARCS Washington Research Foundation (3 years)

Leadership Positions

June 2019 – June 2020

President, BioEngage, University of Washington, Seattle, WA

- Developed research partnerships between PNW biotech leaders and UW Bioengineering department