

Languages | English (Native),
German (sprechen,
schreiben C1 Goethe)
(lesen B2 Telc)

Nationality,
Permit | American, permanent B



Profile

A mathematically trained data scientist addicted to problem solving, secure in programming, looking for a new project. With a broad knowledge of industry standard and state of the art mathematical models, I am ready to provide the solutions to get the most out of your data.

During my 6 years of data science experience within academia, I both self started innovative projects and worked together with colleagues to create target oriented data pipelines. I am driven by difficult problems, and my appetite for multitasking contributes to my flexibility working within a team.

Computer Skills

High Proficiency: Python (NumPy, SciPy, scikit-learn, Pandas, spaCy, NetworkX), Google Analytics (GAIQ), \LaTeX , git, Slurm, Linux

Functional Proficiency: SQL, R, Matlab

Education

2011 – 2016
Ph.D. Mathematics | University of Hawai'i at Mānoa
equivariant algebraic topology

2008 – 2009
M.S. Mathematics | Montana State University at Bozeman
time series analysis and dynamical systems

2001 – 2005
B.S. Mathematics | State University of New York at Buffalo
magna cum laude and Honors Renaissance Scholar

Work Experience

2018 – present | Freelancing

- Programming in Python, R, and javascript.
- NLP, machine learning, and utilization of Google API's.

2016 – 2017 Lausanne, Vaud	<p>École Polytechnique Fédérale de Lausanne (EPFL) Blue Brain Project External Collaborator</p> <ul style="list-style-type: none">• Analyzed structural and functional neural connections using novel topological data analysis techniques.• Modeled neurological data using machine learning techniques through large scale analyses deployed at the Swiss National Supercomputing Center.• Algorithm development with Python and git. Batch deployment with slurm.
2011 – 2014 Honolulu, Hawaii	<p>Instructor and Teaching Assistant at University of Hawai'i at Mānoa</p> <ul style="list-style-type: none">• Programmed in Mathematica, Matlab, and Sage.• Taught honors Multivariable Calculus, Calculus and differential equations for scientists.• Taught honors project based courses for scientists, programming and basic data analysis projects.
2009 – 2011 Honolulu, Hawaii	<p>National Science Foundation (NSF) K-12 Teaching Fellow</p> <ul style="list-style-type: none">• Lead programming for animated education projects.• Organized outreach activities within the local community and participated in cultural awareness seminars.• Incorporated math and science research into high school curriculum.• Presented work and participated at international conferences including SC (High Performance Computing) and NSF GK-12.
2007 – 2009 Bozeman, Montana	<p>Teaching Assistant at Montana State University of Bozeman</p> <ul style="list-style-type: none">• Programmed in Maple and \LaTeX.• Pre calculus, Contemporary Mathematics: Website development and lectured classes.• Statistical based Biology lab: Responsible for explaining strategic data analysis and inquiry based experimental design.• Biomimetric Intelligent Systems: Mentored students pursuing robotic coding projects.

2005 – 2008 Bozeman, Montana	<p>Center for Computational Biology, Montana State University</p> <ul style="list-style-type: none">• Programmed in R and Matlab on Linux.• Developed statistical and information theory models for biological data.• Conducted electrophysiology experiments and ETL of sensor data.• Presented at international conferences including CNS (Organization for Computational Neurosciences).• Applied Markov models and systems of Partial and Ordinary differential equation models.
2002 – 2005 Buffalo, New York	<p>Resident Advisor at University at Buffalo</p> <ul style="list-style-type: none">• Organized social, diversity, and cultural events.• Mediation, Conflict Resolution, and trained other coworkers in communication.• Tutored colleagues in Mathematics, Statistics, Physics, Biology, and German.
2003 – 2005 Buffalo, New York	<p>Laboratory assistant at Neurodiagnostic Laboratory at Buffalo General Hospital</p> <ul style="list-style-type: none">• Analyzed neural sensor data in Excel.• Trained in neuropsychological techniques with Multiple Sclerosis patients.