Nick Lauersdorf

Computational Physicist
and Data Scientist

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Social Network

ResearchGate Profile
Github Profile
LinkedIn Profile

Languages

- BASH
- LaTeX
- MATLAB
- Python
- SQL
- C++
- CSS
- HTML
- Javascript

Tools

- Git
- Jupyter Notebook
- Machine Learning
- MatPlotLib
- Microsoft Office
- Numpy
- Pandas
- Scikit-learn
- SciPy
- Seaborn
- Tableau
- Microsoft Azure
- OpenCV
- Pytorch
- SSMS/SSIS
- Tensorflow
- SAS

Objective

Computational Physicist with a passion for finance seeking to apply 8-years of academic research experience to a career in data science and analysis. Extensive experience in both back-end development, with creating and manipulating databases, cleaning and wrangling data, writing algorithms to statistically analyze big data, and building predictive models, and front-end development by designing intuitive visualizations, interactive dashboards, and websites.

Education

PhD in Materials Science | UNC-Chapel Hill Jun. 2019 – Mar. 2024
- Graduate business certificate in Innovation, Leadership, & Management

B.S. in Physics and Math | UW-Madison Aug. 2014 – Jun. 2018

Experience

Research & Programming

Computational Physicist | UNC-Chapel Hill Jun. 2019 – Mar. 2024
- Discovered dependencies and origin of segregation by performing principal component and exploratory factor analysis on multicomponent mixtures
- Enabled prediction of segregation by training logistic regression machine learning model from wrangled C++ molecular dynamics simulations
- Encouraged consistent analysis by writing decision-tree classification algorithm in Python that differentiates phases for time series analysis
- Improved experimental design by deriving predictive statistics theory
- Educated other scientists by presenting at 25 academic conferences and seminars, including 6 at national level, and writing 5 journal publications

Data Scientist | BeAM Makerspaces Jun. 2019 – Jan. 2022
- Enabled cost-efficient scheduling and targeted marketing by developing Tableau dashboards and SQL queries for mining customer microdata
- Improved end-user experience of customer segmentation model by collaborating with marketing, IT, administrative, and research personnel
- Increased first-time users by 15% by designing marketing visualizations
- Led team that created a campus-wide inventory database and QR-based tracking system using Microsoft Excel and Salesforce

Assistant Scientist | PPD, Inc. Aug. 2018 – Jun. 2019
- Increased customer satisfaction through designing Excel spreadsheets and macros for GMP- and FDA-regulated reports for pharmaceutical testing

Computational Physicist | UW-Madison Feb. 2016 – Aug. 2018
- Enabled efficient design of detectors by developing a predictive Bayesian statistics model and multivariate signal optimization algorithms in Python
- Increased efficiency of Python model by 40% through vectorization
- Collaborated with disparate engineering teams to design x-ray detector

Teaching & Mentoring

Competition Mentor | JSHS Aug. 2022 – current
- Earned a total of $8,000 for high school students by placing at nationals with computer vision and deep learning Python projects

Teaching Assistant | UNC-Chapel Hill Aug. 2020 – Jun. 2021
- Introduced others to programming by leading lectures on MATLAB and Python and managing semester-long model development group projects

Awards

NDSEG Research Fellowship [$165,000] | Dept. of Defense 2021 – 2024
Machine Learning for Everyone Certificate | Dept. of Defense 2023
First Place Presentation | Triangle Student Research Competition 2021
Theodore Herfurth Scholarship [$32,000] | UW-Madison 2014 – 2018