BRANDON NOVY

APPLIED DATA SCIENTIST | CHAPEL HILL, UNITED STATES | 5129701276

DETAILS

Chapel Hill
United States
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LINKS

My Linkedin

My Website Portfolio

SKILLS

Python

Data Analysis

Supervised/Unsupervised Learning

NLP

SQL

Git

Research & Development

Distributed Computing

Teaching

PROFILE

Data scientist pursuing a PhD with expertise in computational drug discovery, building scalable pipelines, and leveraging generative AI for high-throughput screening. Collaborates closely with non-computational teams in academia and industry, creating presentations and visualizations that guide high-stakes decisions, often involving budgets from thousands to tens of thousands of dollars. Expertise in nominating compounds from catalogs exceeding 70 billion drugs. Proficient in Python, R, machine learning, and open-source software development, with experience in version control and containerized environments.

EMPLOYMENT HISTORY

Graduate Research Assistant at UNC Center for Drug Discovery, Chapel Hill, NC
June 2023 — Present

- Developed and published Python packages and Airflow workflows for large-scale drug screening, leveraging machine learning techniques.
- Led the computational arm of cross-disciplinary industry projects, guiding compound nomination and purchasing decisions (>$10,000/round) using generative AI and graph-based chemical data analysis.
- Optimized generative AI models (NLP and diffusion-based) on HPC systems with parallelized CPU/GPU pipelines for enhanced performance.
- Applied physics-based methods and molecular docking to prioritize compounds and elucidate binding mechanisms from libraries exceeding 40 billion molecules.
- Engineered a self-hosted MariaDB database for chemical screening data, enabling seamless data integration and analysis.

Senior Research Assistant at Oregon Health and Sciences University, Portland, OR
May 2019 — June 2023

- Conducted genome-wide analysis of large proteomics datasets to investigate opioid receptor regulation and biology, utilizing advanced statistical techniques.
- Utilized R Markdown for differential expression analysis, creating reproducible reports and data-driven insights to guide research findings.
- Developed automated computational workflows for large-scale microscopy data analysis, streamlining data processing and interpretation.
- Published findings from chemical biology screens, providing key insights into regulatory mechanisms within the opioid receptor family and advancing the field.

EDUCATION

PhD in Computational Biophysics, University of North Carolina @ Chapel Hill, Chapel Hill, NC
June 2023 — Present

- Bayesian Statistics, Mathematical Modeling, Applied Data Science, and Machine Learning with a focus on advanced methodologies for computational research and large-scale data analysis.

Bachelor of Arts in Biochemistry and Molecular Biology, Reed College, Portland, OR
August 2016 — May 2019