Cal Nightingale

(919) 797-4409 Durham, NC cal_nightingale@brown.edu

Software Engineer / Data Scientist

www.calnight.in/gale GitHub: CalNightingale LinkedIn: cal-nightingale

Hello! I am a Junior at Brown University studying Computer Science and Applied Mathematics. My interests include mathematical modeling, machine learning, and game theory, among others. Outside of academics, I enjoy discovering new music, reading, skiing, watching basketball, video editing and playing ultimate. I currently play for Brown's team, Brownian Motion, which finished second overall at College Nationals this past May. Please reach out with any questions!

SKILLS

LanguagesPython, C++, Java, C, Bash, MATLAB, HTML, CSSToolsGit, SFTP, 上下, Vim, tmux, Markdown, Make, Jupyter

Database Systems PostgreSQL, SQLite, AWS Athena & S3

TECHNICAL EXPERIENCE

Software Engineering Intern

Aug 2020 — Sep 2022

N1 Health

Boston, MA

- Implemented core N1 Data Lake pipeline, involving parsing client data into csv, processing csv to remove bad data, writing data to SQLite databases and parquets, and uploading data to AWS S3
- Wrote code to collect and visualize aggregate statistics and run background analysis on parsed client data to streamline downstream data science process
- Migrated N1 Data Lake and Model engine from their own repositories into N1 master repository, including refactoring both into separate python packages, to drastically simplify code base and increase code readability

Research Intern Summer 2018

North Carolina School of Science & Math

Durham, NC

- Researched, implemented, and compared the performance of various algorithms applied to the Traveling Salesman Problem
- · Final presentation can be found here

Software Development Intern

Summer 2017

Pratt School of Engineering, Duke University

Durham, NC

- Contributed to the Anaerobic Digestion Pasteurization Latrine Project, designed to "provide clean, sustainable, odor-free latrines for communities of 20-50 people with no water supply or energy source required"
- Wrote C code deployed to latrines in Kenya and the Philippines to regulate their digestive processes and transmit real time data

EDUCATION

Bachelor of Science in Applied Mathematics & Computer Science

2024 — Expected

Brown University

Providence, RI

- Cumulative GPA: 3.90
- Relevant CS Coursework: Data Science, Cryptography, Graphics, Machine Learning, Systems, Data Structures & Algorithms
- Relevant Math Coursework: Linear Algebra, Probability & Statistics, Applied ODEs, Applied PDEs, Numerical Optimization

Certificate of Secondary Education

Jun 2019

C E Jordan High School

Durham, NC

PROJECTS

Filmsplice Python

- Wrote a utility to automatically download ultimate game film clips, splice them together, and upload them to YouTube
- · See details at filmsplice.calnight.in

Minecraft-Esque Procedural Terrain Generation

C++

- Implemented block rendering using OpenGL pipeline
- Implemented biome shape and type assignment using Voronoi Diagrams and Perlin noise
- See details on GitHub

Brownian Motion Website

HTML

· Responsible for maintaining the Brown Ultimate website

ACTIVITIES

Social Chair — Brown Ultimate Frisbee
National Merit Scholarship Finalist
Captain and President — Jordan High Ultimate Frisbee
Captain and Treasurer — Jordan High Ultimate Frisbee

2020 — Present

2019 -- 2019

2018 - 2019

2017 - 2018