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 Senior at Brown University studying Computer Science and Applied Mathematics. My interests include mathematical modeling, optimization, machine learning, and graphical topics like ray tracing and rendering. I currently play for Brown's Ultimate Frisbee team, Brownian Motion, which finished fifth overall at College Nationals this past May.

SKILLS

Languages Python, C++, Java, C, Bash, MATLAB, HTML, CSS **Tools** Git, SFTP, ET_EX, Vim, tmux, Markdown, Make, Jupyter

Database Systems PostgreSQL, SQLite, AWS Athena & S3

TECHNICAL EXPERIENCE

Summer Analyst Summer 2023

Atlantic-ACM
 Boston, MA
 Wrote a python utility to expedite building repetitive slides by automatically pulling Excel data and populating a template slide

- Leveraged analytical skills to assess Business Connectivity survey responses and distill data into meaningful slides
- Conducted extensive market research on diligence projects to help determine sizing and share

Software Engineering Intern

Gap Year 2020-21, Summer 2022

N1 Health Boston, MA

- Implemented core N1 Data Lake pipeline, standardizing data ingestion process and reducing formatting errors at analysis time by 80%. Automated parsing and cleaning client data into csv, writing to SQLite databases and parquets, and uploading data to AWS S3
- Created utilities to collect and visualize aggregate statistics and run background analysis on parsed client data to expedite downstream data science process, decreasing time to create deliverables by 20%
- Decreased onboarding time by 1 week by refactoring N1 Data Lake and Model engine from their own repositories into separate
 python packages within N1 master repository, drastically simplifying code base and increasing code readability

Software Development Intern

Summer 2017

Pratt School of Engineering, Duke University

Durham, NC

- Wrote C code deployed to latrines in Kenya and the Philippines to regulate their digestive processes and transmit real time data for the Anaerobic Digestion Pasteurization Latrine Project
- Decreased downtime frequency by 30% by implementing logging functionality

EDUCATION

Bachelor of Science in Applied Mathematics & Computer Science

2024 — Expected

Brown University

Providence, RI

• Cumulative GPA: 3.90

C E Jordan High School

- 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

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

· Responsible for maintaining the Brown Ultimate website

HTML/JS

ACTIVITIES

Social Chair — Brown Ultimate Frisbee	2020 — Present
National Merit Scholarship Finalist	2019
Captain and President — Jordan High Ultimate Frisbee	2018 — 2019
Captain and Treasurer — Jordan High Ultimate Frishee	2017 — 2018