David Northup

david.northup97@gmail.com   626 392 4761   davidnorthup.com   Los Angeles, CA

Education

University of Washington, College of Arts & Sciences   Seattle, WA

Bachelors of Science: Applied Mathematics (ACMS: DMA)   June 2019

- Applied and Computational Mathematical Sciences (Discrete Math & Algorithms), Dean's List
- Example Coursework: Data Structures, Algorithms, Artificial Intelligence, Computer Systems, High-Performance Scientific Computing, Discrete Math

Professional Experience

Bigstream   Santa Clara, CA

Software Product Engineer   January 2020 - March 2022

- Working as a product engineer throughout our product, deployment, and quality control stacks.
- Developing acceleration compatibility layer in Apache Spark to interface with hyperthreaded CPU and FPGA acceleration technologies.
- Working on customer facing projects involving custom development including work in domain specific languages and support for Hive managed tables, including speedups of up to 8X.
- Developing smart quality control enforcement across multiple repositories to ensure maintained code quality standards conforming to apache open source standards for development.
- Automating regression testing and sweeping experimentation pipelines.
- Working as a part of an agile development team with emphasis on CI/CD and Test Driven Development.

SpaceX   Hawthorne, CA

Software Engineer II   April 2022 - Present

- Worked in a software stack ingesting terabytes of data per day.
- Implemented dynamic domain specific compression that resulted in a 90% space savings on all incoming data.
- Supported a multi-domain query stack used by hundreds of engineers and tons of automated processes.
- Implemented a new general purpose alerting system and an in-stream computation engine used by most programs at the company

Skills

- **Programming Languages:** Java, Scala, Python, C++, C#, C, Matlab, Bash, HTML, JS, TS, CSS
- **Technologies:** Spark, Flink, Delta, Hadoop, HBase, Kubernetes, Docker, Ansible, Angular, Git, Jenkins, Telgraf, InfluxDB, VTune, AWS (s3, EMR, EC2), Azure (NP Nodes), Spring, Maven, CMake, JIRA, Confluence, Imperative & Functional programming, GDB, JUnit, Scalatest, Parquet, Hive, JNI
- Feature Development, Operations, and Testing