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Experience

ServiceNow **Jul 2022 - Present**
Software Engineer - Big Data team *Santa Clara, CA*
- Built and managed data pipelines in Apache Spark to enable data query and visualization of ServiceNow customer data.
- Developed framework to parse raw log files, then correlate them with alerts and anomalies. Support and Site Reliability teams' Mean Time to Recover was improved from >1h to 1min per engineer, and >1000 company hours are saved yearly.
- Deployed key ServiceNow global instance availability data pipeline with minute-level data and daily and monthly aggregations. Data is used by 200+ users through real-time visualizations and aggregated reports.
- Onboarded critical pipeline to ingest user experience data from >20,000 customers for usage and performance analytics.
- Spearheaded development of new User Defined Aggregate Function in Apache Impala for computing percentiles.

Brown University **Sep 2021 - Dec 2021**
Teaching Assistant - CSCI 1600: Real-Time and Embedded Software *Providence, RI*
- Developed course material for TA-led labs with Prof Milda Zizyte for the inaugural run of the class, with 35 students.
- Ran labs using Arduino MKR1000, mentored student groups for a semester long design project and graded homework.

ServiceNow **May 2021 - Aug 2021**
Software Engineer Intern - Big Data team *Santa Clara, CA*
- Primary developer for a logging framework for BigData team's MariaDB database to track all CRUD operations. Framework is still regularly used today for tracking changes and debugging.
- Created Jenkins job to regularly check 6000+ metrics for discrepancies in metadata, then alert engineers for resolution.
- Participated in ServiceNow's internal hackathon and was part of the top 8 finalists out of over 50 teams.

TransferFi **Jun 2020 - Dec 2020**
Embedded Software Engineer Intern *Singapore*
- Programmed, tested, and debugged wireless power transfer optimization algorithms in Python. Code ran on TransferFi's Raspberry Pi-operated power gateways, and transmitted electrical power wirelessly to TransferFi's industrial sensors.
- Designed wireless sensor configuration UI in QT Designer and PyQT for end-to-end operation of gateway.
- Managed InfluxDB backend database and Grafana visualization app that ran on Google Cloud Platform.

Education

Brown University **Sep 2018 - May 2022**
Bachelor of Science: ScB - Computer Science and AB - Engineering; GPA: 3.86/4 *Providence, RI*
- **Coursework:** CS - Operating Systems, Machine Learning, Data Science, Programming Languages, Distributed Systems Engineering - Design of Robotic Systems, Digital Electronics System Design, Design of Computing Systems
- **Leadership:** President - Brown University Merlions (Singapore Student Club), Co-Founder/VP - Brown Flying Club

Projects

Undergraduate Teaching and Research Award - CubeSat Robot Arm
- Built proof-of-concept robotic arm for use on nanosatellites under Brown School of Engineering's Prof Rick Fleeter. Arm was designed in SolidWorks, control software was coded in MATLAB and Arduino using Inverse Kinematics concepts.
- Prototype arm and software serves as the foundation for the Brown Space Engineering student club's PVDX CubeSat, and project was featured on Brown University's news portal.

Independent Study Course Project - Indoor Robot Navigation with 3D LiDAR
- Programmed TurtleBot 2 to autonomously navigate through an indoor environment using Simultaneous Location and Mapping (SLAM) and people detection algorithms, while equipped with a Velodyne VLP-16 LiDAR.

Helios - Smart Blinds and Alarm Clock
- Built and programmed wireless voice-controlled smart blinds using Arduino Uno and BitVoicer for speech recognition.

Weenix OS - Barebones Unix Operating System
- Constructed Unix-like operating system in C that is able to make system calls, run system commands and user code.

Skills

Languages: Java, Python, SQL, Bash, C, Arduino (C++), MATLAB
Technologies: Apache Spark, Kafka, Impala, Parquet, Kudu, HDFS, HBase, Yarn, Git, Cloudera Data Platform, Google Cloud Platform, MariaDB, InfluxDB