

Stephen Sun

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EDUCATION

Brown University

Sep 2018 – May 2022

Bachelor of Science: ScB-Computer Science and AB-Engineering; GPA: 3.86

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

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 retrieve and parse raw log files, and correlate them with alerts and anomalies, improving Support and Site Reliability teams' Mean Time to Recover from hours to minutes.
- 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.
- Created pipeline to ingest user experience data from >20,000 customers for usage and performance analytics.
- Spearheaded development of new Apache Impala User Defined Aggregate Function for computing percentiles.

Brown University

Sep 2021 - Dec 2021

Teaching Assistant - CSCI 1600: Real-Time and Embedded Software

Providence, RI

- Developed course material with Prof Milda Zizyte for the first run of the class, with 35 students.
- Ran labs using the Arduino MKR1000, mentored student groups for 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 actively used today for tracking changes and debugging.
- Created Jenkins job to regularly check 6000+ metrics for discrepancies in metadata, and 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 power gateways operated by Raspberry Pis, and transmitted 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 running on Google Cloud Platform.

PROJECTS

PVDX - CubeSat Robot Arm

- Built a proof-of-concept robotic arm in Solidworks, and coded accompanying control software in MATLAB and Arduino with Inverse Kinematics concepts, for use on nanosatellites under Brown School of Engineering's Prof Rick Fleeter.
- Prototype arm and software serves as the foundation for the current work of the Brown Space Engineering student club's PVDX CubeSat, and project was featured on Brown's news portal.

TurtleBot - Indoor Robot Navigation with 3D LiDAR

- Programmed TurtleBot 2 to autonomously navigate through a mapped 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 smart blinds that operated with voice commands and connected wirelessly to an alarm clock unit.
- Blinds controlled with 2 Arduino Unos and stepper motors. HC12 wireless chip and BitVoicer used for communication.

Weenix - 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