Gerald F. **Wu**

COMPUTER SCIENCE · APPLIED MATHEMATICS

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Skills

Programming: Java, C, GoLang, C++, Python, Scala, OCaml, SQL, Shell scripting
Web: JQuery/JavaScript, ASP Classic, LAMP, HTML/CSS
Other: Red Hat Certified (RHCSA 180-132-714), VMWare vSphere/vSAN, Docker, Kubernetes, Ansible, LaTeX, Git

Education

Brown University   *Providence, RI*

MAJOR: COMPUTER SCIENCE, APPLIED MATH   *2017 - 2021*

CURRENT   **CS**, Software Security | Design & Implementation of Programming Languages
CURRENT   **Applied Math**, Computational Linear Algebra | Stochastic Differential Equations
2019-2020   **CS**, Deep Learning | Distributed Systems | Computer Vision | Systems Security
2019-2020   **Applied Math**, Numerical Optimization | Applied Dynamical Systems
2018-2019   **CS**, Systems | Database Management Systems | Software Engineering | Logic for Systems
2018-2019   **Applied Math**, Applied Partial Differential Equations II | Statistical Inference I | Probablistic Models
2017-2018   **CS**, An Integrated Introduction I | An Integrated Introduction II
2017-2018   **Applied Math**, Applied Ordinary Differential Equations | Applied Partial Differential Equations I
2017-2018   **Math**, Honors Calculus (Multivariable) | Honors Linear Algebra | Abstract Algebra

Experience

Software Engineer Intern   *Seattle, WA*

AMAZON.COM (AWS)   *May 2020 - Aug. 2020*

- Worked with the **Amazon Connect** team, a **cloud-based** call center as a service product running on **AWS**
- Built a deployment pipeline for **Safe Dynamic Config (SDC)**
  - Implemented strict templating and config generation to allow for configuration as code
- Library to pull deployed **SDCs** from remote and parse them for **Feature Access Control (FAC)** (Java)
  - Created this library from scratch – library was not based on an existing codebase.
  - Part of an existing effort to migrate **Feature Access Control** from a flat config file in **S3** to a fast, compartmentalized, safe, dynamic config **deployment as code**
- Implemented a proof-of-concept utilizing the library to replace the existing **FAC** implementation.

Computer Science Teaching Assistant   *Providence, RI*

BROWN UNIVERSITY   *Sep. 2019 - Dec. 2019*

- Undergraduate teaching assistant for **intermediate-level CS class**, CSCI 1270 - **Database Management Systems**

Software Engineer Intern   *Arlington, VA*

LEIDOS   *May 2019 - Aug. 2019*

- Part of software development team working on **autonomous** (self-driving) sea vessels (C++/Python)
- Core member of **systems architecture** team for next-gen virtualization approach (VMWare/Red Hat/Kubernetes)
  - Researched, evaluated, proposed, and implemented various architectures involving **VMWare** clustering, VMWare **vSAN**, Red Hat **OpenShift**, and **Kubernetes**
  - Final proposed systems architecture approved for implementation
- Major contributor of **software migration** process from Red Hat 6 to 7 (C++/Python)
  - Significant code rewriting to fit a **microservice** approach

Applied Mathematics Teaching Assistant   *Providence, RI*

BROWN UNIVERSITY   *Sep. 2018 - Dec. 2018*

- Undergraduate teaching assistant for APMA 0340: Methods of Applied Mathematics II. This course covers both **nonlinear ordinary differential equations** and **partial differential equations** from an applied mathematics perspective.

Software Engineer Intern   *McLean, VA*

FMS INC.   *May 2018 - Aug. 2018*

- Cluster analysis in large-scale graphs (C#)
  - Researched, implemented, and **optimized** the **Markov Clustering Algorithm** (MCL) to identify clusters in relational graphs of size **100,000+** nodes and **120,000+** edges in less than **10 minutes**
- Implemented secure, PCI-compliant payment integration on the web using Authorize.Net (ASP Classic)
  - Complete integration with the **Authorize.Net** payment gateway, including both **one-time** payments and long-term customer **payment profiles**

For additional information, please visit geraldwu.com.