Gerald F. **Wu**

Computer Science · Applied Mathematics

571-730-7934 | contact@geraldwu.com | geraldwu.com | 98WuG | 98WuG

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 — *Sep 2017 - May 2021 (Expected)*

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**