Gerald F. **Wu**

COMPUTER SCIENCE · APPLIED MATHEMATHICS

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Skills

Programming:	Java, C, Scala, C++, OCaml, Racket, Python, Processing, 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 - PRESENT*

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

Thomas Jefferson High School for Science and Technology   *Alexandria, VA*

HIGH SCHOOL EDUCATION   *2013 - 2017*

- GPA: 4.37 – AP Computer Science with Data Structures, Parallel Computing, Computer Systems Research

Experience

Software Engineering Intern   *Arlington, VA*

LEIDOS   *May 2019 - Aug. 2019*

- Worked on **autonomous** (self-driving) sea vessels
- Helped **software migration** process from Red Hat 6 to 7 (C++/Python)
    - Significant code rewriting to fit a **microservice** approach
- Designed **systems architecture** for virtualization approach (VMWare/Red Hat/Kubernetes)
    - Researched proposed, and implemented various architectures involving **VMWare** clustering, VMWare **vSAN**, Red Hat **OpenShift**, and **Kubernetes**
    - Final proposed systems architecture approved for final implementation

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 **non-linear ordinary differential equations** and **partial differential equations** from an applied mathematics perspective.

Software Engineering 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**

Software Engineering Intern   *Washington D.C.*

SMITHSONIAN INSTITUTION   *Jun. 2016 - Aug. 2016*

- Metadata extraction tool (Java/shell scripts)
    - Reads **metadata** from files in an ingest folder and populates an **Oracle database** with the data
- Metadata ingestion tool (Java)
    - Automatically processes **spreadsheets** within ingest folders and populates **Oracle database**

Software Engineering Intern   *Washington D.C.*

SMITHSONIAN INSTITUTION   *Jun. 2015 - Aug. 2015*

- Two-part data integrity program for Smithsonian Digital Asset Management System
    - Ingests **MD5 checksum** data and writes it to an Oracle database, and **verifies data integrity** at a later date