# Gerald F. **Wu**

#### COMPUTER SCIENCE · APPLIED MATHEMATHICS

□ 571-730-7934 1 🛅 98WuG | 🖸 98WuG

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

Applied Math, Applied Partial Differential Equations II | Statistical Inference I | Probablistic Models

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

2013 - 2017

**HIGH SCHOOL EDUCATION** 

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

# **Experience**

## **Software Engineering Intern**

Arlington, VA

May 2019 - Aug. 2019

**LEIDOS** • 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 nonlinear ordinary differential equations and partial differential equations from an applied mathematics perspective.

# **Software Engineering Intern**

McLean, VA

May 2018 - Aug. 2018

FMS Inc.

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 longterm 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 For additional information, please visit geraldwu.com.