Gregory Simpson

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>LANGUAGES AND TECHNOLOGIES

- **Proficient:** Python, Flask, C/C++, Java, JavaScript, Node.js, Express, Bash, SAFe, Agile Development
- **Exposure:** Pandas, Numpy, Docker, Redux, Heroku, MongoDB, React, HTML5, CSS3, Gradle, SQL

>PROFESSIONAL EXPERIENCE

Full S.T.E.A.M.E Ahead | Computer Science Teacher| Amityville, NY (remote) Aug 2019 - Present

- Developed Household Food Data application in Python, Flask and Heroku, providing system to determine how many goods a household needs.
- Created new curriculums for high school students interested in computer science using HTML5 and CSS3 to be used to teach 20+ students web development.
- Assisted drafting bylaws and organizational documents for mission and vision resulting in an active 501c3.
- Provided strategy and mission alignment with brainstorming and hedgehog concept, helping raise $20K.

Sandia National Laboratories | R&D Software Engineer | Albuquerque, NM Aug 2016 - Aug 2019

- Built process to pan and tilt D3 JavaFX scene overriding MouseEventHandler in Java for customers.
- Prototyped next generation simulation model using Python, C++, and Swig prototype, receiving funding for additional 4 months of future rounds of research and development.
- Integrated LAPACK (linear algebra) C++ library with internal CentOS system, modifying source code directly, expanding ICADS project life time by over 1 year.
- Migrated compiler to C++ 11 from C++ 98 for ICADS project, resolving more than 20 issues related to bug crashes from function deprecations.
- Resolved UI performance bugs utilizing Java and JavaFX, fixing 50+ bugs with average of 100% decrease in optimizing data access time.
- Ensured drop down select menu within modeling and simulation system was not causing application from freezing, improving performance by over 60% using Java and JavaFX.

Charles Stark Draper Laboratory | Software Engineer, Intern | Cambridge, MA Jun 2014 - Aug 2014

- Led 2 software devs in resurrecting open source C++ LLVM library; open sourced and used for code conversion.
- Contributed to open source decompiler by designing algorithm that converts goto statements into conditional loops in C++; LLVM used in production to analyze potentially malicious code.

>EDUCATION

M.S. Computer Science, *North Carolina Agricultural and Technical State University* May 2016
B.S. Computer Engineering, *North Carolina Agricultural and Technical State University* May 2013

>PROJECT WORK

FinTrack | Software Engineer | code Oct 2019 - Nov 2019

Financial data collection application that tracks expenditures.

- Developed RESTful API storing financial data to track expenses in JavaScript, Node.js, Express, and MongoDB.
- Implemented authentication and authorization mechanism using JavaScript, Node.js, and OAuth.
- Crafted frontend views using reusable components built with JavaScript, React, CSS3, and Bootstrap 4.

Secure Code Data Aggregation Tool | Software Engineer Aug 2019 - Oct 2019

Tool designed to aggregate security data for risk assessment of application security.

- Designed risk assessment algorithm predicting risk level from provided code samples using Python.
- Built frontend providing visualizations of risk over time from uploaded data files using JavaScript and React.
- Created data parser to parse static application security testing tools output utilizing Java and Gradle.

>CERTIFICATIONS

Certified SAFe 4 Practitioner, *Scaled Agile* 2017
Certified Scrum Master, *Scrum Alliance* 2016