
Summary

Driven college student focused on software development specifically for big data analysis and numerical modeling. Participated in various product engineering development and design projects. Broad academic aptitude, volunteer and internship experience, developing comprehensive knowledge in a variety of industries and business environments. Articulate student who grasps new knowledge rapidly and quickly excels. Self-starter who can quickly identify areas for improvement and automation in business settings, eager to accept unfamiliar tasks to gain experience and knowledge in various areas. Effective communication and excellent customer service skills.

Education and Projects

Dual Bachelor's Degree

- Computer Science
- Applied Mathematics

University of Colorado

GPA: 3.491

Expected Graduation 2021

Boulder, CO

Personal Projects

Data Analysis/Machine Learning

- Implemented Bayesian inference algorithm for easier handling with probabilistic models.
- Regular use with PyMC3, Scikit-Learn, TensorFlow, and Matplotlib for computer learning and data visualization.
- Data gathering and cleansing with Beautiful Soup, Pandas, and SciPy for mathematical modeling and further computation.

Agatha

- A set of software components which provides autonomous systems for house control and monitoring.
- Facial recognition software for a security system built with Python, OpenCV, and a Raspberry Pi.
- Integrated hardware into lights, locks, windows, sockets, and the garage door to provide a physical means for home interaction and monitoring.
- NoSQL databases for current food/supplies inventory and log aggregation.
- On site servers configured for cloud provisioning, PXE booting, data processing, and storage.
- Front-end domain name for external access to internal services via NginX proxy and a custom webpage.

CU 2020 Hackathon Honorable Mention

- Helped develop a volunteer based food transportation web app for leftovers that businesses can donate to food banks.
- Built the database architecture/schema using a PostgreSQL instance.
- Helped style and deploy the public website.

Tools and Languages

Languages: Python, C/C++, JavaScript/Node, HTML, CSS, SQL, NoSQL, STAN
Libraries: NumPy, SciPy, Pandas, Matplotlib, PyMC3, CherryPy, Flask, SQLAlchemy, UnitTest
Methods: Object Oriented, Functional Programming, REST/Graph API,
Tools: Ansible, Kubernetes, Vagrant, Docker, Unix/Linux

Experience & Internships

University of Colorado Boulder – Laboratory of Atmosphere and Space Physics (LASP) **2018 – Present**
Operations Software Intern

- Technical project lead for developing and implementing a new message bus library and architecture to replace antiquated server communication tools
- Developed automation pipelines in TeamCity to standardize building, testing, and deployment
- Responsible for training new hires in modern software development tools and methods, specifically web and database development
- Kickball Coordinator for student employees and willing professionals.

Crebain Incorporated LLC

CEO/Founder**2020-Present**

- Build and maintain web applications/production environments for local business and startups.
- Uses cloud hosting technologies for quick and easy deployment/accessibility.
- Utilizes both Node.js and Python for back-end services/database interaction.

Charter Communication

2018

Intern

- Hired for data entry tasks, rapidly determined need for more efficient automated cataloging.
- Removed duplicates across multiple data sheets using Python and regular expressions.
- Revamped functionality on data center shipment catalog website using Angular/JavaScript. Saved to local machine in an Excel spreadsheet that automatically created a JIRA ticket via a REST API call.

University of Colorado Boulder – Build a Better Book

2017 – 2018

Intern

- Design and manufacture global 3D tactile books for blind children using 3D printers, laser cutters, braille printers.
- Utilize Solidworks, Inkspace, and CraftML to design pages, shapes, and textures.
- Mentor new hires on efficient printing/designing techniques and maintain lab equipment.

Clubs

Imagine CU

2018 -- Present

Acted as a mentor and program planner for events that focused on ensuring the success of women in STEM fields.

GoldShirt Engineering Scholarship Recipient

2017 – Present

SHPE/MAES

2017 – Present

Contribute to biweekly meetings focusing on the success of Latinos in engineering.

Boy Scouts of America – Eagle Scout

2013 – 2017

Achieved rank of Eagle Scout. Appointed to Senior Patrol Leader and Patrol Leader based on exceptional leadership skills. Raised approximately 300 dollars to fund a trail building project with help from other scouts.