JAKE SWARTWOUT

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EDUCATION

University of Colorado Boulder August 2018 - May 2022
BS in Computer Science **GPA: 3.954**
Minor in Computer Engineering and Minor in Business
Deans List all semesters, CU Esteemed Scholar-Sewell, Global Engineering RAP

WORK EXPERIENCE

Kratos RT Logic - Software Engineering Internship May 2020 - August 2021

- Wrote back-end code to improve and expand the implementation of the Data Defender product
- Completed tasks requested and prioritized by the Product Owner, including building new features, fixing bugs, writing python scripts, investigating improvements, and reviewing teammates' code
- Implemented specific features such as uploading configuration files, connected elements of a new API to existing ones, altered stream creation to allow specification of uuid and removal of redundant function calls, expanded on the GUI with Typescript in Angular, and wrote test cases with Cypress, Karma, Pytest, and Google Tests
- Followed an agile methodology, including daily scrums and end-of-sprint ceremonies

Visa - Software Engineering Internship May 2019 - August 2019

- Assembled a BI demonstration website to promote a switch to more modern and powerful BI services
- Taught two teammates how to create SSRS reports, helping them to overcome various roadblocks by explaining the implementations of various features and solving issues related to linking and formatting data

SKILLS SUMMARY

Programming Languages	**C++**, **Python**, SystemVerilog, SQL, Rust, Java, and JavaScript
Software	Jira, Bitbucket and Github, Confluence, Jupyter Notebook, MS Word
Work Ethics	Responsible, reliable, open to feedback, and excited to learn

PERSONAL PROJECTS

Luka - A Basic Compiler for a Personal Coding Language (2021) Python and SystemVerilog

- Built a basic compiler for my own coding language to better understand the entire process of computing
- Created 5 different python scripts to perform the intermediate steps: compiling the code into a Grammar, assembling that into modified RISC-V assembly, encoding this into a homemade binary representation, and then simulating this code in processor built with SystemVerilog

Neural Network to Determine the Edibility of Mushrooms (2020) Rust

- Constructed a 4 layer neural network from scratch that predicted the probability of a mushroom being poisonous
- Trained on 6000 data points (passed as selections of characteristics) and reached an accuracy of 95%

Predictive Text - Writing Analyzer and Generator (2019) C++

- Generated sentences based on the probabilistic word pairing model derived from the original text
- Employed a trie to access words stored in a weighted, directed graph

VOLUNTEERING

- CU Student Ambassador September 2019 - March 2020
- Wood-shop Project Assistant September 2019 - October 2019
- CU Engineering Launch Leader August 2019
- Freshman Mentor at Heritage High School May 2016 - May 2018
- South Suburban Youth Commissioner January 2017 - December 2017