James A. Zeuch

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Education

Bachelor of Science in Computer Engineering December 2018
Oklahoma State University GPA: 3.66

Certifications

Certification in Full-Stack Web Development July 2020 – January 2021
UT Austin (Trilogy Bootcamp)

Technical Skills

Programming Languages and Tools:
Strong - Java, Python, Javascript
Proficient - C, C++, Matlab, Verilog, HTML, CSS, MySQL, SQLite
Basic - C#, XML
Learning – Django, Web Design, Databases, asynchronous Javascript
Unique Library Experience - FFMPEG, Google Test, Jest
Framework Exprience – Visual Studio, Atlassian Suite, Linux, Git, Bootstrap, Bulma, Node.js, Express.js, MongoDB, React
Other Experience: VLSI Design, Circuit Analysis, Computer Hardware, Agile

Soft Skills: Strong Work Ethic, Effective Problem Solver, Adaptable Worker, Passionate Learner, Strong Diagnostic Skills, Strong Communication Skills, Collaborative

Work Experience

Northrop Grumman

Intern – Software	June 2017 – Dec. 2018
Associate Software Engineer	Jan. 2019 – Apr. 2020
Software Engineer	Apr. 2020 – Current

- Create and patch programs written in C/C++.
- Create programs in python to automate and/or simplify work.
- Test program functionality using Google Test.
- Design coding solution to solve problem given.
- Map out coding solution with activity diagrams.
- Debug C software on simulated hardware and Python software in desktop environment.
- Document program use and code changes as they occur.
- Work on coding solutions with team and solve merge conflicts as they occur.

Relevant Projects

Puzzle Solver and Player Website (in-progress)

Description: Website using Django made to solve puzzles like sudoku, kakuro, and kenken. Website portion and multiple solvers are still in progress as well as the website. Plan to expand it to actually allow you to play some puzzles yourself, maybe including ones that are created by program.
-Created the soduku solver in python that has been proven to work for even the hardest sudoku puzzle in a relatively short time(less than 10 seconds).
-Working on website design and adding the actual solver to it using Django.
-Working on additional solvers and trying to expand into realm of allowing one to play the puzzles.
-May expand on showing logical steps to solve the puzzles because it seems like an interesting idea to gain more valuable experience.

Weather Dashboard (Sept. 2020)

Description: Website that uses the Open Weather Map Api to give information on the weather. The front-end is written in HTML and CSS with the Bootstrap framework. The back-end written in Javascript.
- Laid out basic page in HTML and give it basic structure using Bootstrap to match design given.
- Write custom CSS for custom styling more complex sections.
- Added Javascript to make page interactive and responsive.
- Made requests to open weather map api and displayed desired information from response.

Bit Flipping Tool (Apr. 2020 – May 2020)

Description: Python program that took a folder as input and rewrote any necessary structs in the C, C++, and header files to switch the order of the bits. This would allow the program to work on a machine and operating system that uses a different endian structure.
-Implemented a structure to handle bit flipping shorts, ints, and longs by using #ifdefs to allow it to continue working on current platform.
-Copies file structure to prevent destroying code should something unexpected happen.
-Saved weeks of rework and was broad enough to be applied to other systems that needed it.

Mercury Robotics Robot (Aug. 2018 – Dec. 2018)

Description: Robot that could complete an obstacle course, as well as an autonomous section of the course. Robot had to also be able to be controlled over the internet.
-Helped with the server side python program that allowed the robot to receive and interpret commands.
-Implemented the client side python program that ran using the keyboard as a controller using pickle before sending the instructions to make sending fast.

Minesweeper (Oct. 2015)

Description: Java program to simulate the classic game of minesweeper.
-Implemented model class to keep track of basic data and build game's mechanics.
-Implemented controller class to design the board in paint and handle the player's moves.
-Implemented view class to display the board to the player.
-Added a feature for revealing all surrounding spaces if no mines exist adjacent to clicked spot.
-Later added support for different difficulty levels.
-Later added a file menu, which included a save feature, load feature, new game, and quit.