Alexander Ding

312-860-8038 | ading6@illinois.edu

Education:

University of Illinois at Urbana-Champaign May 2022
Bachelor of Science in Computer Science GPA: 3.69/4.0
Coursework: Data Structures, System Programming, Algorithms, Database systems, Communication Networks

Work Experience:

Embedded Software Engineer June 2020 - Aug 2020
The Aerospace Corporation

- Implemented pruning and quantization script to reduce size 10x and improve performance accuracy
- Converted existing Keras model into C with STM32 AI expansion package to execute on dev-board
- Delivered outbrief presentation to department to share and inform intern achievements and project results

Individual Projects:

Custom built split keyboard Oct 2019 - Mar 2020

- Collaborated with an ECE partner to design and generate custom PCB gerber files utilizing KiCad
- Modified and adapted existing firmware to allow for compatibility and custom functionality
- 3D modeled and designed custom acrylic case utilizing FreeCAD and AutoCAD

Amazon price category comparator Nov 2020

- Deployed web application to scrape Amazon price data and store them in SQL and noSQL database
- Utilized Flask, HTML/CSS as a frontend to query and view price over time and correlated category data

Raspberry Pi keypad lock Oct 2019

- Created a keypad I/O password module on a Raspberry Pi and cross-compiled password detection program(ARMv8) to bare metal target within the boot partition
- Developed single-thread assembly process to matrix scan keypad and to control an 8-segment display

Django Applications May - Aug 2020

- Developed django web application to serve as a simple blog where users can add and create posts
- Deployed local application to run on a web server hosted by local machine

Sudoku solver visualization June 2018

- Implemented a sudoku solver algorithm using backtracking which displays each step in the algorithm
- Produced a GUI utilizing PyGame module to visualize backtracking and enhance user interaction

Activities:

IPL (Illinois Programming League) 2018-Present

- Compete in weekly coding challenges on Codeforces and Leetcode to improve problem solving, technical, and analytical skills and techniques
- Discuss and share solutions and thought processes to gain more perspective and explore better approaches

SIG Natural Language Learning 2019-Present

- Imported PyTorch modules to pull Yelp reviews and run ML algorithms to categorize reviews
- Explored different techniques and processes used in text analysis such as “bag-of-words” and “N-grams”

Skills:

Software: C/C++; Python; Java; Django; Linux/Unix; MySQL; NoSQL; MongoDB; HTML/CSS
Hardware: Circuit design; Soldering; Computer anatomy