Derek Deng

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EDUCATION   May 2022

Arizona State University   4.00 GPA
In progress for a Bachelor's Degree in Computer Science - Tempe, AZ
- Dean's List (Fall 2018, Spring 2019, Fall 2019, Spring 2020, Fall 2020).
- Part of March for Our Lives chapter in ASU.
- Part of Not My Generation – Arizona Coalition.

SKILLS

- Worked with **C, C++, Java**, **Python, MATLAB**, **Scheme,** and **MIPS**.
- Exposed to **UNIX** and some **JavaScript**, **node.JS** and **Prolog**.
- Knowledgeable in **Windows** operating system. Basic knowledge in **Linux**, **VirtualBox, Wireshark, Excel** and **PowerPoint**.
- Knowledge of basic software development processes such as **Agile** development, **GitHub** and **Git**.
- Taken a course in Data structures and Algorithms in **C++.**

PROJECTS   June 2017 – January 2021

- Programmed a command-line genetic algorithm in **C++** which uses randomized data sets to score genetic fitness, with the goal of improving fitness in a theater that simulates COVID-19. Each generation is comprised of people whose genes are from a "mother" and "father" with a chance of mutation.
- Implemented **Dijkstra's Algorithm** using a maxheap to calculate shortest paths in **C++.**
- Developed a **Java** applet that can take attendance, plot data, and can read and save .csv files with a team using **Agile** methodology. Primarily programmed backend of this project.
- Created multiple command-line minigames using random distribution via **C**. Used simple artificial intelligence as the opponent.
- Created a small message-bot on the messaging service "Discord" using **DiscordJS**, a **node.JS** module. The bot replies to certain keywords and can perform administrative tasks such as removing users and clearing messages.
- Wrote a **Java** applet that allows the user to create and submit movie reviews using **JavaFX**. Applet saves data within the program.
- Created and programmed a rudimentary **JavaFX** program that allows the user to draw.
- Used **Intel Quartus Prime** to design a simple virtual processor and tested the processor via an **Intel FPGA MAX** board.
- Main contributor of managing and programming an autonomous robot that can navigate through a maze via **MATLAB** and could pick up a passenger.
- Created a small 3D game on Unity using **JavaScript** using imported models via **AUTOCAD**.
- Built desktops under various budgets and specifications.

REFERENCES UPON REQUEST