William Long Shi

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Education   May 2023

University of Texas at Austin
   BS in Computer Science and BA in Plan II Honors
   Coursework: Computer Graphics, Operating Systems, Linear Algebra, Computer Architecture, Data Structures, Discrete
   Math, Introduction to Probability, Stanford Machine Learning (Coursera), Harvard CS50(Edx)
   Cumulative GPA: 3.80

Experience

Independent Research w/ UT BWI Labs – Austin Texas   Sep 2020 – Dec 2020

- Worked with the UT BWI Lab on ROS projects involving ML motion planning algorithms and random map generation.
- Adapted a python script to generate 100x100 world files that simulated city like environments for navigation training.
- Researched different traditional navigation algorithms that could outperform the current ML motion planning in use.

Foundation Communities – Austin Texas   Jan – March 2020

- Worked as a social work intern to assist in various operations and programming in the health initiatives (HI) department.
- Analyzed pantry attendance numbers to find trends for various properties for a report centered around predictive stocking.
- Crafted a nutrition education curriculum that is going to be used by Community Health Workers for HI Fitness classes.
- Researched content and coordinated with staff for HI Monthly newsletter

Academic Success Program – Dallas Texas   May – June 2019

- Worked as an intern who helped low income students navigate financial aid and college research process.
- Helped manage various databases and paperwork for student records and progress.
- Discussed creating a Python visualizer tracking internal student data for in network college counselors

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Skills

Experienced in Java, Python, Octave, C, C++   Familiar with technologies like Git, Jupyter, Tensorflow, Pytorch, Pandas

Familiar with C#, Bash, MS-Batch, PHP, HTML/CSS   Premiere, Photoshop, Excel, MySQL, Wireshark, PSOC Creator

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Projects

- **AR Face Filters –**a CNN built with pytorch that predicts facial points, given video input, that are used to center a mesh.
- **Page Hunter –** 2-D Side Scroller fighting game where a librarian fights people with overdue books.
- **Breast Cancer Detection** - CNN that identifies the presence of metastasis in histopathologic lymph-n slides.
- **The Onion -** Bank-atm-credit card security protocol and hardware implementation in Python and C.
- **OpenWisp2** - Opensource network topology project and community that I worked for in conjunction with GCI.
- **GHClubs** - MySQL database system I made for clubs to schedule meetings, post information, and track members.

Activities and Honors

- **Robotics-** Served as head programmer on FTC team for four years with consistent regional qualification along with helping coordinate school robotic events to raise STEM awareness.
- **MIT Lincoln Laboratory BWSI** - Performed labs under Mitre Coporation and MIT-LL for a month in the basics of embedded security, encryption, side channel analysis, and buffer overflow attacks. 1st place in the eCTF.
- **NASA High Aerospace Scholars** - Worked under experts on site and gave a full PDR about designs for a human mission to Mars.
- **Data Science Club** - Co-founder of club dedicated to teaching student's applied data science for future career interests
- **Liberal Arts Council** – Served as a college ambassador member for one semester as Policy Coordinator for one year, and currently serve as the Vice President of the organization.