Maggie Ding (Gaoxing)

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Education

BASc. Computer Engineering, University of Toronto (Sept. 2016 – present)

3rd year, graduating June, 2021

Relevant Courses: Computer Fundamentals (C, C++), Signals and Systems, Algorithms and Data Structures, Introduction to Databases, Computer Networks, Introduction to Machine Learning, Multimedia Systems.

Online course and Certification: Python Data Science Toolbox (Datacamp), Learning From Data (CalTech), Machine Learning (Stanford University)

Skills

Technical Skills

- **Data Science**: Python with NumPy and Pandas, R
- **Programming**: C++/ C, MatLab, HTML, CSS, JavaScript, Verilog, VHDL, Swift
- **Operating Systems**: Windows, Mac OS, Unix/Linux and Android including mobile platforms
- **Software**: Microsoft Office, ModelSim, Quartus, LaTex

Multi-lingual

- Native Proficiency in Mandarin Chinese.

Experience

Software Engineering Intern May 2018 – present

Huron Digital Pathology & University of Toronto Multimedia Lab

- Developed a fluorescence UI prototype for image classification of digital image scans using C++ that greatly reduces time and error for professional pathologists.
- Used MatLab tools from image processing and computer vision to analyze fluorescence microscopic image.
- Design a machine learning toolbox to aid in automatically classifying tissue from digital pathology slides using convolutional neural network (CNN).

Team Leader Jan. – April 2017

Engineering Strategies & Practices, University of Toronto

- Attended workshops to build a sumo robot prototype (Arduino based), researched existing designs and components of sumo robots.
- Collaborated with three other teammates and presented the final design to the client.

Projects

Geographical Information Systems Design (C++) Jan. - April 2018

- Designed a C++ geographical information system that converts data points to visual maps.
- Implemented A* algorithm to find direction, and Greedy algorithm and multithreading to efficiently solve the travelling problem.

1000 Netflix Shows (Python) July 2018

- Built an analytical model to understand the rating distributions of Netflix shows.
- Utilized Python libraries such as NumPy and matplotlib to create visualizations.

Digital Systems Design (Verilog) Sep. 2017 – Jan. 2018

- Created an audio beat player, customized with 8 different samples, which can both record and playback beats.
- Connected keypresses and playback module to VGA, which would light up based on which sound sample is playing

Co-Curricular Involvement

Event Associate, IEEE University of Toronto Student Branch April 2018 – present

- Promote events such as hackathons through marketing campaigns and graphics design.
- External outreach to industry professionals and faculty members for collaboration, sponsorship, etc.