Shiqi (Alex) Tan

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Skills

- Programming: Python, C/C++, SQL, Verilog, Java, MATLAB, JavaScript
- Computer-Aided Design: AutoCAD, Rhinoceros 3D(Grasshopper)
- Native proficiency in English and Chinese
- Experience in fast-paced development

Experience

MAY 2022 TO AUGUST 2023 | *Python, PyTorch, NumPy, Open3D, LaTeX, SciPy, Pandas, Matplotlib*

Perception Research Engineer/ Noah's Ark Lab, Huawei Technologies Canada

- Researched relevant methods in the field of computer vision and machine perception for autonomous driving. Areas of interest include semantic segmentation, object detection, occupancy prediction, and scene understanding.
- Designed and implemented 5 real-time deep learning models for semantic segmentation to be deployed.
- Achieved SOTA results and submitted one research paper to peer-reviewed conference as co-first author.

JUNE 2021 TO AUGUST 2021 | *Python, Django, adb, Airtest, MySQL, Cocos2D-X*

Software Development Engineer in Test/ Cloud and Smart Industries Group, Tencent

- Cooperated on constructing a remote automated testing tool based on Django REST Framework.
- Implemented API's that initiate the auto-testing by extracting data from 3000+ entries across 4 schemas.
- Developed fundamental package for running auto-tests on applications created with Cocos2D-X engine. Encapsulated functions from the Cocos engine and well as Airtest framework for controlling virtual devices.
- Wrote 20+ scripts across 4 categories of activities. Incorporated various execution logics for functionality testing.

MAY 2020 TO AUGUST 2020 | *SQL, Microsoft Excel*

Data Analyst/ Capital Markets & Enterprise Risk Portfolio Management, Bank of Montreal

- Developed SQL query test cases to ensure accurate and precise data migration.
- Executed 70+ test cases and analyzed result data from 3 schemas in both database environments. Compiled test outcome and reported critical issues, achieved 98% data accuracy.
- Received Return Offer from manager after internship period.

Projects

SEPTEMBER 2019 TO APRIL 2020

Public Relations / Engineering Strategies and Practice Team, University of Toronto

- Collaborated to create an emergency warning system for Toronto Island flooding mitigation.
- Designed crawlspace flood drainage system, extracted 8000+ litres of water per hour.
- Conducted client meetings, organized project information and presented updates to client.

DECEMBER 2018 | *C++, OpenStreetMaps,*

AT&A Maps / Software Communications and Design, University of Toronto

- Extracted geographical features and data from OpenStreetMaps. Used GTK toolbox to design user interface.
- Utilized appropriate STL containers to improve responsiveness, designed algorithms such as pathfinding and collision detection for image icons, as well as a non-standard version of the travelling salesman problem.
- Compiled State-of-the-Art software reports, studied objectives of the project and generated usability tests.

NOVEMBER 2020 | *Unity, echoAR*

iApplyAR / NewHacks 2020 Hackathon, Best AR/VR Application

- Created interactive AR educational software using echoAR and Unity, received "Best AR/VR Application" award.
- Included build instructions for furniture, possible applications include electronics repair guide, etc.

Education

STARTING SEPTEMBER 2019 | cGPA: 3.6

Computer Engineering/ University of Toronto

- Relevant courses: calculus, linear algebra, electronic circuits, operating systems, computer networks, machine learning