ANTON LIU

ENGINEERING SCIENCE | University of Toronto

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github.com/liuantonliu

SKILLS

- **Machine Learning:** Python (Tensorflow, Pytorch, openCV, Keras, numpy, pandas, Sklearn)
- **Databases:** PostgreSQL, MongoDB
- **Web Dev:** Flask, HTML, CSS, JS
- **Other Languages:** Java, C, C++
- **Tools:** Git, Azure, Excel VBA, RStudio, MATLAB
- **Modelling:** Solidworks, ANSYS
- **Project Management:** Agile, Scrum, JIRA, SDLC
- **Leadership:** demoing, teaching, innovating, decision-making

ADDITIONAL EXPERIENCES

- **Engineering Intern,** Schweitzer Engineering Laboratories
- **Engine Subsystem Member**, UofT Formula SAE Racing Team
- **President**, Principia STEM Society
- **Captain**, Trudeau Dragonboat
- **Lifeguard/Instructor**, Markham
- **Event Coordination Executive,** Junior Optimist Octagon International

EDUCATION

University of Toronto
Engineering Science B.A.Sc. 2T2 (Machine Intelligence), GPA: 2.92

EXPERIENCES

MACHINE LEARNING INTERN @ ORKESTRA SCS *05/20 – Present*
- Performed data cleaning and validation on millions of live datasets from clients
- Wrote automated web scraping scripts and sent API requests to acquire information from logistics corporations with >99.9% success rate
- Ensured data safety with Microsoft Azure Key Vault and secure database storage
- Blended vessel trajectory and ocean conditions data to predict shipment delays with 91% accuracy

BRAKING SYSTEM LEAD @ UOFT HYPERLOOP TEAM *07/19 – Present*
- Led team of engineers to develop braking system methodically and efficiently
- Formulated robust design through Collaboration with industry professionals, research on past solutions, published articles, and spec sheets
- Designed state diagrams and programmed braking control logic using C++

DATA ANALYST @ UNION LITHPLUS ENERGY CORP. *05/19 – 08/19*
- Developed analytical models and used statistical techniques (predictive value, time series analysis, A/B testing, etc.) to ensure high quality analysis
- Set up automated data queries and pipelines to speed up future analysis

CHIEF ENGINEER @ ROBOTICS CLUB EXECUTIVE TEAM *09/16 – 06/18*
- Managed 5 teams design progress, inventory, and club sponsorships
- Hosted engineering workshops to teach robotics principles to club members
- Designed robots in team of 9 and ranked top 10% in Provincial Championship

PROJECTS | *For more of my projects, visit my **GitHub***

SHIPPIE GROUP ORDER SYSTEM *github.com/liuantonliu/Shippie*
- Developed web app that uses machine learning to suggest potential groups to join based on various parameters such as locations, friends, and wish lists
- Implemented using MongoDB and JS (TensorFlow.js, Node.js, Express.js)
- Optimized data processing and delivery speed with efficient data structures

PEDESTRIAN ASSIST IOS APP *devpost.com/software/crossy-road-64byjt*
- Developed app GUI using CoreML that identifies pedestrian signals through a live phone camera feed and outputs vibration to identify red lights
- Achieved 87% confidence in image classifier using Azure CustomVision

AUTOMATED EV CHARGEBOT
- Used OpenCV to detect charging port location from Raspberry Pi camera
- Removed noise from IR and ultrasound sensor data to determine robot location