Zhehao Xu

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Linkedin | Kaggle | Github

EDUCATION

University of Waterloo, Waterloo, Ontario
Master of Engineering, Electrical and Computer Engineering, December 2019
Graduate Coursework: Foundations of Software Engineering; Software Testing, Quality Assurance and Maintenance; Database Systems; Data & Knowledge Modelling & Analysis; Protocols, Software and Issues in Mobile Systems; Image Processing and Visual Communication

University of Windsor, Windsor, Ontario
Bachelor of Applied Science (Hons.), Electrical Engineering (Minor: Mathematics), June 2018
Undergraduate Coursework: Fundamentals of Digital Signal Processing; Control Systems; Sensor and Vision Systems; EM Waves & Radiating Systems; Digital Integrated Circuit Design; Computer Networks Security; Wireless Communication

EXPERIENCE

Project Coordinator, Intern
GIANTECH Engineering, Tradehub21, Singapore, October – December, 2017
- Created learning programs on Gnowbe learning platform including inert gas system (IGS), inert gas generator (IGG), Kyma power meters for new engineer trainees.
- Developed logo concepts for "GIA Methods" under GIANTECH Engineering and been selected as one of the best designs.

Research Assistant
Electrical & Computer Department, University of Windsor, Windsor, Ontario, September, 2015 – April, 2016
- Developed vehicle licensed plate detection & recognition software using two approaches: traditional computer vision algorithms using OpenCV and artificial neural network. It cropped license plates in the given picture and recognized any alphabetic and digit combination on a given license plate

ACADEMIC PROJECTS

Overwatch Data Analysis
University of Waterloo, Waterloo, Ontario, April – August, 2019
- Found out elements that effected the match results the most with 83% prediction accuracy on match results in Overwatch video game by constructing and training a random forest classifier using Kaggle dataset along with pandas, scikit-learn in python.
- Learned how to preprocess raw data, construct and tune parameters of the random forest classifier and also other potential classifiers including multilayer perceptron, SVM classifiers.

Lane Detection System for Autonomous Driving
University of Windsor, Windsor, Ontario, January – June, 2018
- Rendered the Detected mask in 1080p, 60fps real-time overlaying on top of the original video clips
- Developed a lane detection system in a team of 3 members based on fully convolutional neural network that could highlight safe areas for the vehicle during the driving.
- In charged of testing the trained neural network and evaluated its performance on self-recorded on-road videos in Windsor.
- Implemented the system onto raspberry pi

SKILLS

- Python (Proficient), C++, C, Java
- Pandas, NumPy, Keras, TensorFlow, Matplotlib, Plotly, Scikit-Learn, OpenCV, Folium, SciPy, SpaCy, Django, Flask
- SQL, Git, Excel
- Chinese (Native), English (Proficient)