VINCENT HWANG

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EDUCATION

UNIVERSITY OF WATERLOO Waterloo, Ontario
B.A.Sc, Civil Engineering – Dean's Honour List Expected May 2021
Coursework

- Smart Structure Technology: Signal Processing, Computer Vision, Image Recognition, Neural Networks
- Finite Element Analysis, Structural Design, Fluid Mechanics, Project Management

NATIONAL UNIVERSITY OF SINGAPORE Singapore
International Exchange Term August – December 2019

WORK EXPERIENCE

ANDREWS.ENGINEER Toronto, Ontario
Lead Programmer November – February 2020

- Developed a computer program using Ruby and SQL to assign the correct rehabilitation method to damaged sewer pipes, through the extraction and analysis of data stored in InfoNet databases.

Engineering Intern May – August 2017

- Established and coded a Microsoft Access form and database system for sewer rehabilitation contracts.
- Streamlined data collection and consolidation processes through coding scripts in VBA and SQL, increasing efficiency twofold.

ARUP Toronto, Ontario
Project Management Intern April – August 2019

- Coordinated the interdisciplinary design of the 11km long Toronto Finch West LRT.
- Ensured the satisfactory completion and timely submission of 100% of project deliverables.
- Led internal design teams and external stakeholders towards project progress through periodic design meetings, calls, and emails. Fostered an environment of collaboration, communication, and excellence.

RWDI Guelph, Ontario
Climate Analysis and Software Intern January – December 2018

- Applied data analysis methods to create design wind speed maps for the Saudi Arabia Building Code.
- Conducted data cleansing, exploration, and visualization on historical and forecasted meteorological data. Used SQL Server, Excel, and VBA to form a model of expected design wind speeds.
- Authored a research paper describing the uncertainties involved in using the Gumbel distribution model to predict peak cladding pressures for wind tunnel tests on buildings.

SIDE PROJECTS

Personal Website

- Developed a personal blog and website using Jekyll and Ruby, hosted on GitHub Pages.

PhotoScanner *(CamScanner Replica)*

- Used OpenCV and Python to compute homography matrix and apply geometric transformation to images.

Neural Network from Scratch

- Built a regression and classification neural network from scratch in Python.

ADDITIONAL INFORMATION

- Languages: Fluent – French, Native – Mandarin Chinese
- Programming: Python, Ruby, SQL, VBA, MATLAB, HTML
- Tools: Git, OpenCV, SciPy, sklearn, SQL Server, MS Access & Excel
- Awards: University of Waterloo President's Scholarship, BC Ministry of Education Scholarship
- Certifications: Standard First Aid & CPR C, CASI ACMS Snowboard Instructor Level 1