

Edward Poon

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Education

Rensselaer Polytechnic Institute (RPI)

Graduation date: May 2024

Bachelor of Science in Computer Science

Flatiron School

Graduation date: April 2025

Certificate in Data Science

Engineering Projects

Semantic Segmentation for Self Driving Cars

Python(Keras, Tensorflow), Git

- Developed U-Net CNN models for semantic segmentation of road environments of images taken from CARLA, achieving 79% mean IOU score in labeling cars, roads, signage, etc.
- Enhanced model architecture through strategic implementation of regularization techniques and activation functions, significantly improving small object detection capabilities
- Implemented and compared multiple deconvolution methods (Conv2DTranspose vs Upsampling2D), optimizing model performance for small object detection in autonomous driving applications

Predicting Tanzanian Well Functionality

Python(Keras), Git

- Developed a predictive model to assess the functionality of Tanzanian water wells, utilizing machine learning techniques to enhance resource allocation for maintenance efforts.
- Leveraged real-world datasets from Taarifa and the Tanzanian Ministry of Water, integrating features such as water quality and geographical location to inform model predictions.
- Structured models to prioritize minimizing false positives, ensuring that non-functional wells were accurately identified to prevent unnecessary repairs.

Secure package delivery tracking through smart contracts

Python, FastAPI, Solidity, Git

- Developed a package delivery tracker that deploys a smart contract to a local Ethereum blockchain, with an API to allow frontend entry and commitment of package delivery data
- Encoded ability to automatically provide payment in ERC-20 tokens once the delivery is marked as completed, recording the status in the smart contract
- Integrated AI Model trained on hourly traffic volume counts obtained from the NYC Department of Transportation to predict travel time and display information to end user

Work Experience

KTM Properties

May 2022 - August 2022

Data Analyst, Finance and Investment Group

- Created SQL database from real estate listings to store trend data and identify potential investment opportunities
- Maintained data integrity by updating and confirming accuracy of revenue and expenses, and regularly created summary reports of results as well as updated projected financial results

Elenion Technologies

July 2019 - August 2019

Site Reliability Engineer Fellow

- Tested incoming telecommunication transceiver module components to ensure quality control and performance
- Designed 3D-printed test fixture parts, assembled electrical connectors, soldered circuit boards, and spliced optical fibers
- Ensured data integrity of wafer status in database and overhauled and maintained storage division in clean room

Skills

Languages:

Python(Keras, Pandas, Tensorflow, Matplotlib), C++, SQL

Technologies & Tools:

FastAPI, Git, Docker, Tableau