Dylan Chen

+64 021-146-8719 | dche610@aucklanduni.ac.nz | linkedin.com/in/dylan-chen-763b15200

Technical Skills

Languages: Python, R, SQL, Bash, JavaScript, HTML/CSS
Developer Tools: Git, Docker, Kubernetes, GitHub, GitHub Actions, GitLab, Azure, AzureML, Azure DevOps, AWS, Linux, Snowflake, PowerBI, QGIS, CVAT
Frameworks: Tensorflow, Keras, PyTorch, Terraform, Pulumi, Flask, FastAPI, Spark
Certifications: Microsoft Certified: Azure Data Scientist Associate

Experience

Software Engineer Feb. 2023 – Present
KPMG Lighthouse *Auckland, New Zealand*

- Reduced batch inference time for a tax asset classifier by up to 80% via integrating asychronous calls to OpenAI
- Engineered Spark pipelines to serve dashboards for over 10,000 NZ Police staff using Azure Synapse Analytics
- Reduced monthly spend on cloud infrastructure, saving up to $4000 USD per month by migrating two retail analytics applications from AWS EC2 to Azure PaaS (App Service, Container Instance, Blob Storage)
- Implemented data pipelines to classify risky driving behaviour for over 7 million St. John ambulance trips on IBM Cloud using Polars for data transformation and sci-kit learn for unsupervised machine learning

Machine Learning Engineer Intern July 2022 – Feb. 2023
Umajin *Auckland, New Zealand*

- Reduced image labelling times by 50% via deploying and configuring CVAT (image labelling platform) on AWS EC2 with Docker and implementing GPU-accelerated automatic annotation
- Trained and deployed deep learning models for NTT and Starbucks which were presented by the CEO to more than 61,000 attendees at MWC 2022 using PyTorch, Keras and Flask
- Automated the data preprocessing for over 20 different image datasets by developing scripts in Python

Data Scientist Intern Nov. 2021 – Feb. 2022
Arup *Auckland, New Zealand*

- Reduced time to validate simulation output by 7 days via implementing traffic volume benchmarks (traffic counter snapshots for different roads) for an agent-based simulation of transport in NZ using Python
- Visualised and presented over 50 proposed transport infrastructure changes to research scientists in the development team by extracting data from AWS EFS and running geospatial queries with QGIS
- Implemented scripts to process over 10 different GIS datasets from sources such as CoreLogic using geopandas

Projects

Object Detection for Trash Sorting | *AzureML, MLFlow, PyTorch* Nov. 2023 – Feb. 2024

- Trained and deployed a computer vision model to detect 10 types of food waste using AzureML and MLFlow
- Configured and deployed CVAT, which consists of 12 microservices, on Kubernetes (AKS) using a Helm chart

Stroke Lesion Inpainting for 3D Brain MRI | *Python, PyTorch, TorchIO* Feb. 2022 – Oct. 2022

- Trained neural networks to inpaint stroke lesions with healthy brain tissue using 500 brain scans in PyTorch
- Applied brain image preprocessing techniques, reducing training time by 2 days using Python and TorchIO

TakiWaehere Geospatial Hackathon | *Python, geopandas, Matplotlib, Keras* Feb. 2021 – April 2021

- Researched the NZ Transport Agency Crash Analysis Systems dataset resulting in the identification of 3 features correlated with crashes (speed, weather, lighting) using pandas and Matplotlib
- Gathered and presented research on GIS data in 4 days by showing a live demonstration using Jupyter Notebook
- Developed scripts to preprocess 6 high-resolution satellite images of Auckland provided by Maxar in Python

Education

University of Auckland Auckland, New Zealand
Bachelor of Engineering (Honours) in Engineering Science *Feb. 2019 – Nov. 2022*

- First Class Honours - GPA: 7.9/9.0 (A Average)
- Dean's Honours List (2020-2021) - Top 5% of Engineering Cohort