

James McCarron

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WORK EXPERIENCE

Intel

May 2021 – Aug 2022

Software Developer

- Developed features for a Python-based GUI software, enhancing data analysis and management
- Improved IP validation with test-scripting and PyVisa APIs on various oscilloscopes and probes
- Optimized performance and reliability of SerDes IP for external products using A/B testing methods

ENGINEERING PROJECTS

City of Toronto Housing Data Analysis and Visualization

Python, Pandas, GeoPandas, Scikit-Learn

- Developed an end-to-end machine learning solution for analyzing rental prices in Toronto, leveraging efficient web scraping, a self-built dataset, and feature engineering techniques
- Utilized City of Toronto open datasets to gain valuable insights into the geospatial distribution of rental prices and inform data-driven decision making
- Employed robust data preprocessing and hyperparameter tuning to optimize model performance for accurate price predictions

Geospatial Data Visualization Platform

Django, RESTful, Three.js

- Developed a full-stack web application using Django to manage geospatial data, demonstrating proficiency in server-side logic (models, views, controllers) to oversee complex data structures
- Utilized a Geocoder API for location-based data processing and created an interactive and responsive front-end interface using JavaScript and Three.js for visualizing geospatial data on a globe
- Implemented RESTful endpoints for efficient data retrieval and manipulation

Uber Transportation Data Engineering

Python, SQL, Mage, GCP BigQuery, Power BI

- Applied an array of cutting-edge tools to analyze Uber data. Demonstrated expertise in handling large-scale datasets, orchestrating data pipelines, and optimizing data retrieval for efficient and scalable analysis
- Employed GCP Storage and Mage Pipelining to ensure reliable and timely data extraction, transformation, and loading (ETL) processes. Leveraged BigQuery as a data warehousing solution
- Utilized Power BI to visualize and present key insights from the data

EXTRACURRICULAR ACTIVITIES

Executive Logistics Coordinator

May 2021 – Apr 2022

Canadian Undergraduate Conference on Artificial Intelligence (CUCAI)

- Orchestrated a highly acclaimed AI conference for 200 students and industry representatives
- Curated venues and speakers to help create the largest undergraduate AI conference in Canada
- Secured an optimal \$150,000 venue through negotiation and understanding attendees' needs

EDUCATION

Bachelor of Applied Science – Mathematics & Engineering

Queen's University

SKILLS

Programming Languages Technologies

Python | SQL | JavaScript (React.js)
Django | NGINX | Spark | Mage | GCP | AWS | Power BI | Git