James McCarron

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ENGINEERING EXPERIENCE

Intel May 2021 – Aug 2022

Python Developer, Post-Silicon Validation

- Developed new features for a Python-based GUI software, leveraging Matplotlib to display real-time data of register values, enhancing the visualization of SerDes configuration, debug, and testing
- Created test scripting and PyVisa APIs to streamline IP validation for internal teams and lab equipment, ensuring efficient and reliable chip testing
- Conducted SerDes IP debugging and fine-tuning for major external projects, optimizing performance and reliability

EXTRACURRICULAR ACTIVITES & PROJECTS

Logistics Coordinator

Canadian Undergraduate Conference on Artificial Intelligence (CUCAI)

- Orchestrated a highly acclaimed AI conference, coordinating a diverse audience of 200 students and industry representatives with exceptional leadership and attention to detail
- Curated a lineup of guest speakers for workshops and keynote speeches, fostering cutting-edge discussions and valuable networking opportunities
- Secured an optimal venue worth $150,000 by leveraging negotiation skills and a thorough understanding of attendees' needs, ensuring a seamless and comfortable experience throughout the conference weekend

Toronto Housing Price Prediction and Visualization

Python, Pandas, BeautifulSoup, 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 advanced geographical data visualization to gain valuable insights into the spatial 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

Uber Data Analysis

Python, Mage, 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

Firework Model, GUI Design

Java, Object Oriented Programming, JavaFX

- Utilized object-oriented programming techniques to model the flight path of a firework
- Implemented JavaFX and CSS to create an interactive GUI to change firework parameters

EDUCATION

Bachelor of Applied Science – Mathematics & Engineering

Queen's University

SKILLS

Programming Languages Python (Pandas, Matplotlib, Requests, Scikit-Learn) | SQL | Java

Technologies Mage | Kafka | Google Cloud (BigQuery) | Power BI