

Professional Experience

The Westin Reserva Conchal

Costa Rica & Montreal, Canada

Data Engineer and Data Scientist Consultant, Co-op & Contract

June 2023 – Present

- ♦ Developed a prototype to digitalize the wildlife refuge's animal sighting record process. Introduced crowdsourced data using a fine-tuned CNN model to recognize animals in visitors' pictures.
- ♦ Designed and implemented a full stack solution including a serverless AI infrastructure using Google Cloud Functions and a user interface in React.js.
- ♦ Created a Looker dashboard for real-time monitoring and government report generation using BigQuery as data warehouse.

Pratt & Whitney Canada

Montreal, Canada

Data Scientist Consultant, Co-op

Sept. 2022 – May 2023

- ♦ Located the client's pain points and translated their business requirements into a data-driven solution.
- ♦ Constructed a machine learning system with ETL pipelines and models to predict the completion time of quality control tasks with a balanced accuracy of 79% and built alerts for anomaly detection.
- ♦ Identified the root causes of delayed tasks by using causal inference and text analytics to shorten the investigation time. Concluded with the value proposition of 20% reduction in the workforce required for this process in the following two years.
- ♦ Built PowerBI dashboards for real-time KPI monitoring and to help systemize supplier management.

Qualcomm Technologies, Inc.

Hsinchu, Taiwan

Backend New Product Introduction Engineer, Full-time

Sept. 2019 – Apr. 2022

- ♦ Secured smooth launch of semiconductor products. Conducted descriptive analysis to increase testing and production yield.
- ♦ Reduced the examination process duration by 20% and improved production efficiency by troubleshooting through data analysis with the cooperation of internal and external engineers, vendors, and subcontractors.
- ♦ Optimized maintenance schedule and increased availability by 10% with predictive analysis and malfunction profiling.
- ♦ Led the transfer of complex tasks to Samsung by gathering requirements from multiple teams and documenting the processes.
- ♦ Communicated with stakeholders from different levels including directors from engineering and operation departments.
- ♦ Forecasted the impact of delayed hardware shipments to initiate alternative solutions and ensure commitment to customers.

Project Experience

A Multiple Resource Type Scheduling Problem for Hosiery Production Operations

Hsinchu, Taiwan

Master Thesis at National Tsing Hua University

July 2018 – July 2019

- ♦ Transformed a real-world scheduling problem into a Mixed Integer Programming model using Gurobi and improved time saving by up to 50%.
- ♦ Implemented Discrete Event Simulation and parallel searching algorithms including simulated annealing and Tabu search.

Education

McGill University

Montreal, Canada

Master of Management in Analytics, CGPA 3.7/4.0

July 2022 – Aug. 2023

- ♦ Courses: DBMS, Machine Learning, Optimization, Multivariate Statistical Analysis, Deep Learning, Revenue Management
- ♦ Python Projects: Airline Satisfaction Analysis, Airbnb ML Study, Vehicle Review Analysis, News Topic Modelling etc.
- ♦ Gurobi Projects: Communauto Allocation Research, Concert Routing Optimization
- ♦ R Projects: IMDb Score Prediction, Shark Tank Viewership Analysis

National Tsing Hua University

Hsinchu, Taiwan

M. Eng. in Industrial Engineering and Engineering Management, CGPA 4.1/4.3

Sept. 2017 – July 2019

Chalmers University of Technology

Gothenburg, Sweden

Exchange student, Production Engineering Program

Jan. 2017 – June 2017

National Chiao Tung University

Hsinchu, Taiwan

B. Eng. in Industrial Engineering and Management, CGPA 4.0/4.3 ranked #1 in Department

Sept. 2013 – June 2017

Technical Skills

- ♦ **Software** – Python / SQL / dbt / C / R / Excel / GCP / BigQuery / Looker / PowerBI / Docker / CI/CD / Gurobi / Git / Jira
- ♦ **Data Analytics Tools** – Scikit-Learn / PyTorch / Fast.ai / Matplotlib / CausalML / AutoML / MLFlow / PySpark / Databricks
- ♦ **Certificate** – IBM Data Science Professional Certificate (credential: [Link](#))
- ♦ **Models Used** – Random Forest, Boosting, Tree-based, Linear/Logistic Regression, CNN, RNN, K-Mean, KNN, SVM, PCA

Languages

English (fluent), Mandarin (fluent), Taiwanese (fluent), French (elementary)