

Chayse Wright

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Education

Biomechanical Engineering, Queen's University

2018-2023

Selected coursework: Eng. Mathematics, Statistical Experiment Design, Control Systems, Heat Transfer, Manufacturing Methods, Material Science, Mechanical Product Design, Fluid Dynamics, Data Science

Senior Thesis: "Relationship extraction of metabolic networks in biomedical literature through NLP techniques"

Capstone Design Project: Designed and manufactured neural biopsy device for glioblastomas

Certifications: Machine Learning Scientist & Data Science Associate, DataCamp.
Science and Business (Biotechnology), MITx & MIT Sloan School of Business.

Experience

Asset Integrity Engineering, TC Energy

September 2021-September 2022

- Monitored data quality for 80K+ km of pipelines and 600K+ assets across Canada, USA, and Mexico
- Predicted potential asset failures through static equipment data analysis and maintenance logs
- Demonstrated data gaps for 2017-2022 inline pipe inspections
- Aided in work management for 1000+ pipeline technicians
- Created a blended expert and time series forecasting machine learning model to assist decision makers for alternative energy acquisition

Research Assistant, Queen's Tissue Engineering and Regenerative Medicine Lab

May 2020-Feb 2021

- Created and tested a novel electrical circuit for muscle cell stimulation in a bioreactor
- Consulted in the design of a bioreactor for tissue engineering and cytokine production

Project Manager, Queen's Biomedical Innovation Team

March 2020-Apr 2021

- Lead a team of 8 engineers in creation of a control system for a lightweight electric wheelchair
- Managed electromechanical system design for a therapeutic glove that monitors post-stroke hand spasticity

Head Finance Coordinator, El Salvador/Belize Mission

December 2016-August 2017

- Managed each aspect of a low seven figure budget for international non-profit organization, including accounting and forecasting
- Administrated and counseled on finances of 160+ volunteers from over 20 countries

Volunteer work

Full time volunteer in El Salvador/Belize: 7000+ hours of volunteering included English classes, community service, and gang violence prevention

Queen's Venturer Scout: Highest scouting recognition in Scout's Canada for youth, awarded by Governor-General

Skills

Technologies: High proficiency Python skills with broad experience in related data analysis/science frameworks
Python (sample libraries: pandas, pyspark, matplotlib, scikit-learn, TensorFlow, PyTorch, XGBoost, Spacy, Bokeh),
SAP, SQL, R, MATLAB, Simulink, C, SolidWorks, Creation with GPT-4, Git, Excel, Power BI, Azure

Extra Data Science Projects: Changes in surface solar radiation matched with economic trends across the USA from 1971-2018(time series, causal analysis), Forex trading bot (time series analysis, DL, CNNs)

Design: FMEA, Control systems, Circuit design, Process Development, Mechanical design/analysis, 3D printing and prototyping, Project Management, Lean manufacturing

Languages: English & Spanish: Bilingual, Norwegian: Intermediate, French & Mandarin: Elementary