Hugo Dignoes

Bachelor's of Applied Science
Chemical Engineering
w/ Minor in Analytical Chemistry

Contact

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Languages

English
Excellent

Spanish
Excellent

French
Very Good

Catalan
Very Good

Skills

- Python/Basic MATLAB
- Computational Modelling
- Interfacial Chemistry
- Analytical Methods
- Reaction Engineering
- Experimental Design
- LabVIEW
- Sustainable Engineering

Polyglot, chemist, engineer. I like to solve problems, play chess, and shred slopes. Strong communication skills, broad academic background, and versatile lab skills. I am the only UBC APSC student to have ever minored in chemistry.

Education

2016 - 2021

Bachelor of Applied Science: Chemical Process Engineering

University of British Columbia - Vancouver, Canada

- Cumulative Average in Chemical Engineering: **78.4% (B+)**
- First and only APSC student to **minor in Chemistry.**
- Was on the board of executives of Vancouver's **American Institute of Chemical Engineers Student Chapter** during my 2nd and 3rd years of study.
- Was involved with multiple engineering design teams, including UBC Envision, UBC ChemE Car, and UBC Voyage.

Capstone Project

- *Production of Renewable Natural Gas: Methanation of CO2 Using H2 Obtained Through Water Electrolysis*
- **Won the 2021 Design and Innovation Day award** as chosen by industry experts
- An alternative to carbon sequestration which makes use of existing infrastructure to help Canada transition to renewable energy.
- Designed, simulated, and optimized reactor, heat exchangers & heat integration.
- Performed economic analysis, environmental assessment, and lifecycle analysis, as well as HAZOP study.

Experience

2018 - 2019

Research Assistant

UBC Biofoundry, Vancouver, BC

- Developed low-cost device to accurately measure viscoelastic properties of neural cells for CTE/Alzheimer's research.
- Designed experimental procedures; collected, processed, and displayed data; found simple solutions to complex biomechanical problems.
- Reduced production cost of device by over 80% while improving accuracy, precision, and ease of use.

2016 - 2017

Electrical Team Lead

UBC ChemE Car, Vancouver, BC

- Led a team of 6 in the design and building of a circuit for a small chemically-powered car.
- Designed and improved sensing and control systems.
- Coordinated with two other teams to create an empirical model of car speed and iodine clock reaction based on initial conditions.

2017 - 2018

Safety Officer

UBC Envision, Vancouver, BC

- Recognized, documented and advised on removal of hazards.
- Conducted safety audits, managed chemical inventory, and ensured proper disposal of all waste.
- Trained new team members in workshop and lab safety.
- Reviewed and advised on development of Standard Operating Procedures.
- Negotiated and mediated agreements between design teams sharing labs and workshop space.
- Designed and built an inventory system on Google Drive.

2020 - 2021

Tutor

Paper Education Company, Vancouver, BC

- Helped schools across USA and Canada adapt to online learning.
- Taught physics, chemistry, math, Spanish, and French to middle and high school students.
- Often tutored up to 5 separate students simultaneously, requiring tremendous attention and quick & clear communication.

2020 - 2020

Product Manager

DECAP Research & Development, Vancouver, BC

- Volunteered with 3D printing company to provide British Columbia with face shields during early stages of the COVID-19 pandemic.
- Established stakeholder needs and reviewed design to improve customer satisfaction without sacrificing safety.