Nicholas Rasmussen

MASc Candidate, Chemical Engineering

rasnicholas99@gmail.com | +1 (289) 885-1522 | n-rasmussen

SUMMARY

Graduate engineering student with excellent analytical skills, technical knowledge, and business acumen demonstrated through technical education and 2 years of industry experience. Passionate about technology, data science and improving efficiency. Seeking a full-time position where I can utilize my abilities to help create value for the organization and its clients.

EDUCATION —

University of Waterloo

- Candidate for Master of Applied Science Chemical Engineering
- Engineering Excellence Master's Fellowship
- Ex. Courses: Bioseperation, Intro to Machine Learning, Transport Phenomena, Flowsheet Analysis

University of Waterloo

- Bachelor of Applied Science,
- Honours Chemical Engineering
- Materials and Manufacturing Processes Specialization
- Management Sciences Option
- Dean's honour list with distinction (GPA 91.64%)
- Capstone Project: Solvent Recovery of Multilayer Plastic Films
- Awards: President's Scholarship, Capstone Design Award (best overall project)

KEY SKILLS —

- Excel (data analysis, macros, VBA)
- Python (pandas, scipy, sqlite, tensorflow, numpy, scikit-learn)
- Aspen Plus, SuperPro Designer
- Numerical methods
- MATLAB, HTML, CSS, SQL
- Time and priority management
- Technical communication
- Teamwork and creativity
- Problem solving
- Project planning

CERTIFICATES & COURSES —

- Lean Six Sigma Green Belt (2019) – YDelay
- The Complete Python Coding Course – Udemy
- Deep Learning Specialization – deeplearning.ai
- Supply Chain Fundamentals – uWaterloo Professional Development

EXPERIENCE

Master's Thesis – Continuum Model and Design for Space Photobioreactor

September 2022 – August 2024

- Design & prototyped hydrogel-based bioreactor using CAD, CNC & 3D printing
- Second phase team in CSA Deep Space Food Challenge design competition
- Developed two phase DAE continuum model for hydrogel transient response
- Solved model numerically in python to create unit model for new bioreactor design
- Design and planned long-term experiment for effective time management
- TAships: Intro to Process Control, Intro to Programming

Project & Controls Engineering Co-op • Zeton Inc.

September – December 2020, May – August 2021, May – August 2022

- Troubleshot and configured over 950 instruments/sensors within project timeline
- Coordinated drawing revisions with 6 vendors and documentation management
- Valve sizing and technical specifications for instruments
- Designed 70 interface screens for end user needs like readability and efficiency

Sustainability and Capital Projects Intern • PepsiCo

September – December 2019

- Stakeholder management and procurement for $15,000,000 biomass project
- Managed installation of $90,000 of equipment with vendors and contractors

Corporate Reliability Engineering Coop • IKO Industries

January – April 2019

- Used VBA and excel to clean, format, and analyze plant asset reliability data
- Fixed bugs and improved performance of a VBA based resume screening tool

Water Treatment Research Assistant • University of Waterloo

May – August 2018

- Designed and conducted experiments to measure chemical actinometry
- Effectively communicated analyzed results using Microsoft Office

PROJECTS

- Ethylene to ethanol process design in Aspen Plus
- Therapeutic process design in SuperPro designer
- Machine learning models (Ridge, K-nearest, Random Forrest, RNN, convolutional NN)
- "Space invaders style" game (with PyGame)
- Bookkeeping system for Chemical Engineering Student Society as president
- Safety documentation system for UW Concrete Canoe and Toboggan Team

INTERESTS

Data Science | Formula 1 | Running | Wood Carving | Reading | Investing | Piano | Tutoring