

Antony Xu

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Professional Summary:

Enthusiastic student software developer with process engineering background. Passionate about continuous learning and enjoy utilizing new technologies to solve business solutions. Outstanding troubleshooting and analytical ability with proven track record of analyzing large data to identify opportunities. Demonstrated ability in leading a cross-functional team to solve urgent and complex problems in an agile environment.

Education:

TechCareers Software Development Program

Jan 2021–Present

SAIT Post-graduate Certificate

Chemical Engineering Co-op Program, BSc

Sep 2013 – Apr 2018

University of Alberta

GPA 3.8/4.0

Skills:

- 3+ years' experience in data analysis using Python, JMP, SeeQ, Excel, Tableau to identify business and technical opportunities
- 2+ years' leading plant personnel to optimize business operations and execute process improvements
- Programming Stack: Python, C++, C#, JavaScript, Node.js, React.js, Express.js, Bootstrap, SQL, T-SQL, MatLab, HTML, CSS.
- Excellent leadership, verbal/written communication skills, and fast learning capabilities
- Strong understanding of and experience in applying data structures and algorithms. Basic understanding of operating systems

Projects:

Personal Portfolio Website

- Portfolio site at <https://antonyxxu.github.io/>
- Created using React.js, HTML, JavaScript, CSS for a single page application for a personal website
- Apply hooks for creating, updating, and filtering component states and handling events

Windows Wallpaper Slideshow

- Program allows for a wallpaper scroller (not natively available in Windows for multi monitors)
- Created using python, PIL, ctypes to interface with Windows OS
- Detects monitor number and resolution automatically on start and on change, and sorts landscape/portrait background images, then renders a combined image to set as a wallpaper based on a user set timer

Travel Website

- Dynamic travel website at
- Created using HTML, JavaScript, CSS, Node.js, Express, Pug/Jade in a MongoDB database
- Functionalities include user login/registration, create, update, and filter travel packages after login
 - Data collection includes user, purchased package history to view popular locations

Ghost Racer Game

- 2D driving game to implement object-oriented programming
- Created in C++, with two primary base classes (one for game world, one for all objects within game world). Separate objects perform activities through common virtual functions to interact within the world
- Implementation uses common virtual functions for object interactions with other objects within the game world.

Work Experience:

Utilities Technical Contact Engineer

June 2018–Dec 2020

Imperial Oil

- Oversaw Strathcona refinery utility operations and helped manage teams of 10 operators daily
- Identified business optimization opportunities through process data analysis using Python/JMP/SeeQ
 - Reduced annual operating expense by \$1.5M/yr and achieved lowest refinery energy intensity in history
 - Analyzed historical steam system shutdowns and updated process control logic to eliminate various plant reliability risks (\$10M/yr)
- Utilized linear regression machine learning algorithms to manage process modelling data and predict product specifications, which optimized yield and increased gas oil sales by >\$100k/yr
- Lead cross-functional teams to carry out plant tests, asset improvement initiatives, and support 45MW Cogen unit startup
- Organized and identified refinery safety risks in Hazard and Operability Study for refinery utilities systems

Economics and Production Optimization Engineer

May 2017–Dec 2017

Canadian Natural Resources Limited

- Modelled and created robust Tableau and Python analysis tools for oil sands production
 - Prevented ~\$50M/yr in potential lost product by identifying single point of failures
- Utilized process modelling to enhance product quality predictions, which resulted in a >50% reduction in prediction time
- Built detailed financial models to assess feasibility of selling gas products to new market following new asset acquisition

Quality Engineering Intern

May 2015–Dec 2015

ERCO Worldwide

- Monitored process fluid quality specification and performed quality assurance plant validation equipment
- Managed meetings to complete over 50 management of change items with a refinery-wide team
- Implemented sampling program to locate and troubleshoot groundwater contamination sources

Process Operator

May 2015–Dec 2015

Teck Resources Limited

- Constructed, commissioned, and operated copper upgrading process in demonstration plant
- Improved effluent treatment process to improve utilization by 30% through eliminating feeder issues
- Optimized autoclave reactor runtime, ultimately reducing overflow incidents by 50%

Additional Information

- Hobbies include racket sports, hiking, skiing, board games
- Regular volunteer for badminton tournaments at SmashCity Badminton
- Fluent in Chinese Mandarin