

Amrinder Bhogal

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Technical Skills

Languages: Python, C, C++, Java, HTML/CSS, Javascript, SQL, MATLAB, R, AutoLISP, VBA

Developer Tools: Git, React, Node.js, pandas, Django, MongoDB

Industry Knowledge: REST APIs, Scripting, SaaS, CNNs, GenAI

Relevant Experience

C.F. Crozier & Associates Inc. (Crozier) | Engineer-in-Training

Guelph & Bradford, Jan 2022 – Current

As an Engineer-in-training:

- Prepared and submitted over 25 technical documents, including Environmental Compliance Approvals (ECAs), Functional Servicing Reports (FSRs), Stormwater Management Reports (SWMRs), and Due Diligence Memos, ensuring compliance with project requirements.
- Drafted 20+ project proposals, assisting with pricing, budgeting, and scheduling, contributing to successful bids and project acquisitions.
- Worked to automate project workflows using Excel VBAs and CAD workflows using AutoLISP and Python.
- Authored an innovation report identifying key technological gaps in engineering workflows, leading to contributions in the company's AI-driven initiatives.

As a co-op student:

- Presented annually at Crozier's Co-op Information Night at the University of Guelph, engaging with students and providing industry insights on behalf of the company.

Exco Technologies Limited (Co-op) | CAD Programmer

Markham, May 2021 – Nov 2021

- Managed excel database of over 150 customer CAD orders, verifying quality and dimensions for accuracy and organization
- Improved the manual data collection process for over 70 unique extrusion dies by automating data entry and analysis using custom-built Python and AutoLISP scripts, tracking 30+ key metrics for die performance.
- Reviewed drafts drawings of extrusion dies, identified discrepancies, and reported findings to the supervising manager

Projects

Trend Analysis Tool for Stock Identification

- Overview: Developed an automated tool that integrates Google Trends and Yahoo Finance APIs to identify stocks with low price-to-earnings ratios paired with high public interest.
- Technologies: Utilized Python for data extraction, processing, and analysis; employed SQL for efficient data storage and querying.
- Impact: Streamlined the process of spotting undervalued yet popular stocks, facilitating data-driven investment decisions.

\$SIDU Day Moving Average Calculator

- Overview: Designed a dynamic calculator that computes daily moving averages (5, 10, 20, and 50-day) for \$SIDU, displaying a real-time chart that overlays these averages with the stock's price.
- Technologies: Leveraged Python for development and visualization, and SQL for retrieving and managing financial data.
- Strategy: Implemented a technical indicator strategy where a buy signal is triggered when the 5-day moving average falls below the longer-term averages and there is no negative news, supporting timely and informed trading decisions.

Education

Bachelor of Environmental Engineering (B. Eng.) | University of Guelph

Relevant Courses: Engineering Economics, Engineering Systems Analysis, Differential Equations, Fluid Dynamics, Numerical Methods, Engineering Analysis, Process Control, Mass Transfer Operations, Assessment & Mngt of Risk, Statistics & Probability for Engineers