

Gosha Dulkan

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Education

McMaster University

Engineering Physics (B.Eng)

Hamilton, Canada

Sep. 2018 - Apr. 2023

- **Courses:** Object-Oriented Programming, Data Structures & Algorithms, Embedded Programming

Skills

Languages Python, C, C++, Java, JavaScript, HTML, CSS, Shell

Tools TensorFlow, Scikit-learn, Git, Linux, Trello, Pytest, Flask, SQL, MATLAB

Experience

Coordinate Industries Ltd.

Electrical Engineer Intern

Oakville, Canada

Aug. 2021 - Aug. 2022

- Spearheaded the development of Python **automation scripts**, streamlining product testing workflows.
- Led the design and deployment of internal wire harness test programs, resulting in a **150% product test rate increase**.
- Collaborated with stakeholders to create **200+** standard-compliant assembly and quality control plans.
- Visualized company KPIs with **Python and Tableau**, identifying trends to enhance planning.

McMaster Rocketry Team

Flight Controls Team Lead

Hamilton, Canada

Sep. 2020 - Sep 2021

- Led a team of four in developing a flight computer module for a competition model rocket.
- Developed, tested, and optimized scripts to enhance payload sensors' data collection and processing capabilities, contributing to a **200% improvement** in launch success rate.
- Implemented Kalman filtering for **real-time data analysis**, enhancing flight data prediction accuracy.
- Trained and onboarded 5 new team members to ensure seamless integration and knowledge transfer.

Projects

KinoStats | [GitHub](#)

- Developed a **responsive Flask web application** with multithreading for efficient data processing, enhancing user experience with rapid movie analytics insights.
- Integrated with **TMDb API** using **RESTful services**, offering a dashboard visualizing Letterboxd film distribution, genres, spoken languages, and top directors.

Digital Chessboard | [Demo](#)

- Designed a digital chessboard enabling remote play with physical chess pieces.
- Integrated **OpenCV** computer vision to enable real-time board state capture and precise piece movement tracking using an overhead camera system.

Road Sign Recognition System

- Engineered a **deep learning model** with **TensorFlow**, achieving 97% road sign classification accuracy.
- Used OpenCV for preprocessing and refined the model with various architectures and hyperparameters.

Power Plant Control System

- Leveraged **embedded C programming** to integrate PID system control for a simulated power plant on an Arduino controller.
- Conducted **software debugging** and performance testing, ensuring reliable system operations.