

# Mihir Kakkar

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## SKILLS

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Languages: Python, SQL, JavaScript, MATLAB, Java, PHP, HTML/CSS

Tools: NumPy, Pandas, Tensorflow, MongoDB, Prefect, Airflow, React.js, AngularJS, Git, XML, Unix/Bash

## WORK EXPERIENCE

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**Cuberg** - Data Engineering Intern (Emeryville, California) Jan 2021 - Apr 2021

- Developed a monitor and tracking system for thousands of Lithium cells on test using Python, Prefect, NumPy and Pandas saving the test team **an hour of work, daily**.
- Created a machine learning model for cell cycle life prediction, and implemented it on the current tracking system, reducing cycling time per cell **by 40%**.
- Implemented a cell cycling utilization tracker using Python and MySQL, cutting daily data collection time **by 80%**.
- Created new safety alarms for monitoring critical errors during cell testing using Python, Dropbox API, and Slack API, catching **2 critical safety hazards per month**.

**Bank of Montreal** - Software Developer Intern (Toronto, Ontario) Sep 2020 - Dec 2020

- Prototyped location based login bypass using AngularJS, Redux, and Node.js for an increased customer verification speed **by 40%**.
- Designed and built a new customer procedure API, with physical address capture feature, **increasing security** of online transfers.
- Built **3+** new responsive pages with popup functionality using AngularJS and SQL, **increasing information obtained** through customer tracking.

**AlertDriving** - Software Engineering Intern (North York, Ontario) Jan 2020 - Apr 2020

- Independently built the license management audit trail feature using JavaScript and MySQL, leading its integration internally, saving the business team **10 hours of work, weekly**.
- Developed license template feature, reducing mistakes made in license creation **by 20%** (in 2 months of A/B testing).

**Bank of Montreal** - Software Developer Intern (Toronto, Ontario) May 2019 - Aug 2019

- Developed multiple accessibility features on the Online Banking Platform used by thousands of clients with vision impairment using Java and XML.
- Integrated UI changes and bug fixes in AngularJS seen by over one million customers.

## Projects

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**Airplane Optimizer (MacHacks Best Environmental Hack)** - Python, Qiskit, NumPy, Pandas

An application that applies the traveling salesman problem to the airplane industry and uses quantum computing to compute the optimal solution

**Nightcorify** - Python, NumPy, Tkinter, Wave

A program increases the pitch and speed of any WAV file, based on the popular Nightcore music trend.

## EDUCATION

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University of Waterloo, Bachelor of Nanotechnology Engineering Co-op

Sep 2018 - Apr 2023