# DOLLY MOULEKHI

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## SUMMARY OF SKILLS AND QUALIFICATIONS

**Operating Systems** | Windows • Linux • Mac
**Programming Languages** | Python, SQL, HTML, CSS, NoSQL(MongoDB), C++
**Machine Learning** | Sci-kit-learn • MLflow • HyperOpt • Recommendation systems • Model deployment • Model Evaluation
**Data Visualization** | Tableau • Plotly • Matplotlib • Seaborn • PowerBI • Google Data Studio
**Big Data Technologies** | Spark • Apache Kafka
**Web Scraping** | BeautifulSoup • Scrapy • Selenium
**Text Mining** | Natural Language Processing (NLP) • SpaCy
**Geospatial Analysis** | GIS (Geographic Information Systems) • GeoPandas
**Cloud Computing** | Amazon Web Services (AWS) • Google Cloud Platform (GCP)
**Version Control** | Git • BitBucket
**Text Mining** | Natural Language Processing (NLP) • SpaCy

## EDUCATION

**Master of Engineering – Mechanical Engineering** **2023-2025 (Expected)**
Concordia University, Montreal, QC
- Doing Specialization in Industrial Control Systems
- **Relevant course work:** Robotics, Industrial Automation, MicroProcessors and Application, Electrical Engineering

**Bachelor of Engineering – Mechanical Engineering** **2016- 2020**
Uttarakhand Technical University, Dehradun, India
- **Relevant course work:** Robotics, Strength of Materials, Thermodynamics, Fluid Mechanics

## WORK EXPERIENCE

**Teaching Assistant (TA)** **Jan 2024 - present**
Electronics for Mechanical Engineers, Concordia University, Montreal, Quebec.
- Led laboratory sessions covering topics such as DC motors, modular design, and flip flops.
- Demonstrated expertise in testing electronic components (resistors, capacitors, batteries, diodes) using multimeters.
- Assisted students in understanding electric motor drivers, integrated circuits, and potentiometers in electronic systems.

**Teaching Assistant (TA)** **Jan 2024 - present**
Computer Integrated Manufacturing, Concordia University, Montreal, Quebec.
- Provided comprehensive instruction on the operation and management of the OpenCIM system, CNC milling stations, and CNC turning centers, ensuring students gained practical knowledge through interactive sessions.
- Facilitated learning in system integration and optimization, empowering students with practical skills to streamline manufacturing processes and enhance efficiency in real-world applications.

**Data Scientist** **May 2021 – August 2023**
Better Place Safety Solutions, Bengaluru, India

- Developed a recommendation system for the rocket application that increased the click-through rate by 40%.
- Generated job recommendations for more than 20 million blue-collar workers.
- Conducted statistical analysis to determine the key factors influencing application rates, utilizing statistical analysis techniques and correlation matrices to identify features directly correlated with application creation, resulting in a 10% increase in application rates.
- **Technologies used:** Python, Scikit Learn, Numpy, Pandas, Docker, EC2, Machine learning, LightGBM, MLFlow, HyperOpt.

**Data Analyst Intern** **Feb 2021 – May 2021**
Better Place Safety Solutions, Bengaluru, India

- Created sales dashboards representing end-to-end information about leads.
- Created daily reports about KPIs (Key Performance Indicators) for the company.
- Analyzed data from the campaign run to understand the drop-in funnel report.
- Technologies used: Numpy, Pandas, Google Data Studio, PowerBI

## PROJECTS

**Autonomous Robot Development Project**

- Led the development of an autonomous robot using C++ programming language.
- Implemented image processing and control algorithms for object detection, navigation, and collision prevention.
- Designed attack and defense mechanisms enabling the robot to engage opponents and protect itself, contributing to advancements in autonomous robotics.

**HIL Car Simulator with Arduino Controller Board**

- Designed and Implemented Car Simulator: Contributed to the development of a Hardware-in-the-Loop (HIL) Car Simulator at Concordia University, leveraging Arduino as the central controller board.
- Engineered Control Systems: Developed traction, braking, steering, and speed control mechanisms to simulate realistic car behavior, focusing on accuracy and responsiveness to enhance the authenticity of the simulation.
- Employed register level programming techniques to optimize the performance and efficiency of the Arduino controller board.

**Smart Material Selection for Enhanced Aerospace Performance: A Machine Learning Approach**

- This project aims to enhance material selection by recommending the most suitable composite materials for specific applications.
- It classifies materials based on key mechanical properties
- Technologies used: Classification algorithm, SVM, Random Forest Classifier

**Advanced screw defect detection**

- Trained a classification model for determining defective and non-defective screws.
- Technologies used: Python, SVM model, Image Processing

## VOLUNTEER WORK / EXTRA-CURRICULAR ACTIVITIES

**Image Analysis** **July 2019 - Aug 2019**
NASA/Pan-STARRS

- Analysis of images captured by pan-starrs by using the software Asterometrica for searching new asteroids by using particular criteria for knowing whether the moving object is an asteroid or some kind of anomaly.

**International Space Apps Challenge**
NASA

- Built an application for informing localities of rural areas about nearby fire scenarios.

## AWARDS & RECOGNITION

- Received 'Star Performer' award for building a recommendation system and implementing it to the Rocket app.
- Received recognition for valuable contributions in observing near-Earth objects and Main Belt asteroids by analyzing the images from Pan-STARRS.
- Secured 1st position in National Aeronautical Olympiad and was among the top 500 students nationally out of 100k+ Students.