**Final year Engineering Graduate student seeking full-time employment starting June 2020.**

**EDUCATION**

**UNIVERSITY OF TORONTO Toronto, Ontario**

Master of Engineering – Emphasis on Analytics Aug 2018- Present

Department of Mechanical and Industrial Engineering Engr GPA: 3.94/4.0

**COLORADO STATE UNIVERSITY Fort Collins, Colorado**

Bachelor of Science Sept 2013- May 2017

Major: Engineering Science – Space Engineering Concentration Engr GPA: 3.19/4.0

Minor: Mathematics

# TECHNICAL ASSETS & INTERESTS

* **Cloud:** AWS Elastic Beanstalk
* **Software Languages:** Python, C, C++, Java
* **Web Development:** Django, HMTL, JSON, CSS JavaScript, bootstrap, MySQL, Oracle, JQuery.
* **Version controlling system:** Git, Github
* **Coding platforms/IDEs:** Jupyter notebook, sublime text, cognitive labs, Eclipse.
* **Machine Learning libraries:** NumPy, SciPy, pandas, Matplotlib, Sci-kit Learn, Seaborn, beautifulSoup
* **Big Data (Hadoop):** HDFS, pig, spark, yarn, mapReduce, ambari
* **Financial Engineering:** RRN, Keras functional API, LSTM, time-series problems
* **Machine Learning Concepts:** data mining, data cleaning, Linear regression, Logistic regression, clustering, decision trees, neural nets, classification, feature engineering, SVM, non-linear programming, Artificial Neural network, time-series algorithm.
* **Mechanical/electrical engineering systems:** Arduino Duo, CNC, machine shop (lathe, bandsaws, drill press), Ansys CFD, SolidWorks CAD modeling, CREO parametric modeling.
* **Communication Languages:** English (native), Hindi and Tamil (fluent)

**EXPERIENCE**

## CO-FOUNDER AND PRIMARY PROGRAMMER - TRAY SOLUTIONS Inc. May 2019 – Present

**Front and Back End Developer [Hatchery – University of Toronto]**

* Designed and developed mobile website (https://entray.ca) for multi-vendor restaurant marketplace using dine-in services
* Website created using Django framework and deployed through AWS
* Integrated an external payment gateway (Stripe) for online mobile payment with over 100 transactions successfully conducted through the website
* Completed two successful pilot tests at restaurants and three restaurants fully integrated with Tray
* Project was placed third in the final round of competition and was evaluated on product quality, customer traction, pitch deck presentation, and business model development

## DATA STRUCTURES TEACHING ASSISTANT Jan 2019 –April 2019

**Teaching Assistant and Lab Coordinator [University of Toronto]**

* Lab teaching assistant in data modeling, MySQL DBMS, OLAP queries, and DB application with JDBC

## WEB DEVELOPER - VICTORIA UNIVERSITY Sept 2018 – May 2019

**Front and Back End Developer [E.J. Pratt Library]**

* Maintained the EJ Pratt library website, front end development, implementing search systems and database maintenance

**INTERN - KING ABDULLAH UNIVERSITY OF SCIENCE AND TECHNOLOGY** June 2017 – Dec 2017

**Soft Robot Programming [Integrated Nanotechnology Lab - Dr. Muhammad Mustafa Hussain]**

* In charge of designing and constructing a heart sleeve that would be capable of actuating heart muscles to help with ventricular blood circulation to assist patients who suffer from cardiomyopathy
* Constructed a soft robot that would actuate upon an electrical stimulus. After the testing and configuration of this robot was undertaken a final report was presented to the university.

**BOEING 3D PRINTED ATTENUATOR PROJECT - COLORADO STATE UNIVERSITY**  Aug 2016- May 2017 **Senior Engineering Design Project** **[Motor Engineering Research Centre – Dr. Donald W. Radford]**

* Designed and analyzed the dual gantry system on a 3D printer capable of printing PEEK thermoplastics
* Created the CAD model of the printer and used this to conduct mechanical and heat analyses
* Showed proof of concept on lightweight, heavy-duty 3D printed alternatives for attenuators that line the inner walls of airplane turbines

**TEAM MEMBER - COLORADO STATE UNIVERSITY**  Jan 2016 – May 2016

**[Mechatronics Lab]**

* Constructed an interactive punching bag for the Mechatronics Project
* Led the electronic and mechanical integration of the project
* Programmed IR sensors, actuator integrations, SD cards, and microcontrollers

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# DATA SCIENCE PROJECTS

**NLP Analysis**

* Analyzed sentiments using NLTK libraries to study reviews of hotels from Trip Advisor and report on specific characteristics of a hotel that were positive or negatively rated. All hotels in the city were compared with each other based on a rating scale and visualized using seaborn plots.
* Analyzed tweets of airline travelers to quantify emotions felt by passengers towards any particular airline company in order to understand reasons for grievances towards the airline and created a regression model to summarize all the possible criteria for an airline’s negative reputation.

**KAGGLE Survey Analysis**

* Cleaned survey results and analyzed correlation between different features and salaries, trained various machine learning models to predict future trends and correlations between a person’s qualification and average salaries.

**MovieLens - Recommender System**

* Implemented a collaborative recommendation system to study user-user and item-item similarity to recommend movies to people based on 100,000 movie ratings from 943 users and a selection of 1,682 movies.

**20 News Groups - Classification of Large Data Sets**

* Analyzed 20,000 newspaper articles and categorized them into specific groups based on content of articles, cross-validating the results based on different parameters such as number of features, hyperparameter tuning, etc.

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# EXTRACURRICULAR ACTIVITIES

**Financial Director, AMIGAS (Association of Mechanical and Industrial Graduate Students)**  May 2019 – Present

* Maintained financial records, planned annual budget, applied for funding, and oversaw/managed all financial transactions

**Member, ISA (Indian Students Association)**  Sept 2013 – May 2017

* Event manager and emcee for India Nite 2013-2015
* Involved in the organizing, coordinating, and marketing of Indian Events (Diwali night, Holi, World Unity Fair, and India Nite) around CSU.

**Volunteer, CSU Chemistry Club**  Sept 2013 – May 2017

* Participated in setting up and conducting STEM projects
* Worked on community outreach programs in order to promote STEM programs among high school students.