Krutheeka Rajkumar, B.S., M.Eng

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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
- **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 – Dec 2019

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
- Created website 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 –Present

Teaching Assistant and Lab Coordinator [University of Toronto]

- Facilitates classes and tutorials on data modeling, MySQL DBMS, OLAP queries, and DB application with JDBC
- Supports professor with curriculum design and project assessments.

WEB DEVELOPER AND TECH DESK ASSISTANT - VICTORIA UNIVERSITY   Sept 2018 – Present

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

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

PRICEWATERHOUSECOOPERS CONSULTING PROJECT   Jan 2019 –April 2019

Communication liaison and team member [University of Toronto]

- Prepared a comprehensive report on the diversification of consulting firms.

- Provided data analysis which promoted collaboration with other firms and development of new technology to allow for hybrid of service and product-based model rather than their current, pure-play, service-based model.

INTERN - KING ABDULLAH UNIVERSITY OF SCIENCE AND TECHNOLOGY   June 2017 – Dec 2017
Soft Robot Programming [Integrated Nanotechnology Lab - Dr. Muhammad Mustafa Hussain]
- Designed and constructed a soft robot that would actuate under the influence of an external stimulus to be able to provide sufficient force (as a result of volume expansion) to eventually be used in biomedical applications.

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 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. The goal was to visually represent the performance of a hotel
- 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.

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 managed all financial transactions

Member, ISA (Indian Students Association)   Sept 2013 – May 2017
- Event manager and emcee for annual India Nite 2013-2015
- Supported the organizing, coordinating, and marketing of Indian Events (Diwali night, Holi, World Unity Fair, and India Nite) around CSU.