MUKUND MAUJI

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EDUCATION

Bachelor of Applied Science (BASc), Mathematics and Engineering (Systems and Robotics)
Queen's University, 2016 - 2020

SKILLS

LANGUAGES: French, Spanish, Hindi
PROGRAMMING: Python, DHTML, Latex, MATLAB, C, R
SOFTWARE: MS Office, AWS EC2

EXPERIENCE

Co-Chair - Queen's Engineering Competition (QEC) Mar. 2018 - Current

- Worked in collaboration with the other co-chair to coordinate and plan all aspects of a ~$30,000 engineering competition, attracting over 200 delegates
- Hired and managed a team of 20 members to organize the event, introducing agile methodology to streamline efficiency while applying organizational behavior principles to uphold team morale
- Implemented 5 new competitions, increasing the number of events by 300%

Business Technology Analyst - Deloitte May 2018 - Sept. 2018

- Implemented facial recognition technology to recognize and save faces to a database using a Raspberry Pi and camera
- Developed modular Python application that classified faces using OpenCV while implementing learning model retraining in real time
- Established databases using AWS DynamoDB to upload model data for higher-characteristic trait analysis
- Designed application development under ongoing client needs and collected user requirements

Engineering Tutor - EngLinks Tutoring Service Nov. 2016 - Current

- Tutored one-on-one for high school Math and Science
- Instructed first year C programming and Calculus 1 in groups and one-on-one
- Taught Calculus 1 exam prep workshops for ~60 people
- Prepared and revised workshop resources

PROJECTS

Haskap Berry Harvester - Queen's University Jan. 2017 - May 2017

- Designed and built a berry harvester prototype for a 2-acre farm within physical, financial and design constraints
- Researched existing and upcoming harvesting technologies extensively to determine their strengths and weaknesses
- Determined final solution from multiple choices using weighted evaluation matrices based on design criteria
- Created 3D models and 2D views of several versions of the harvester using SolidEdge
- Compiled all results into a 20-page report detailing the process, implementation methods, all previous iterations and all supporting research

ConU Hacks II - Concordia University Jan. 2017

- Created a Twitter bot during a 24 hour hackathon
- Used a NodeJS server that communicated with Yellow Pages and Twitter APIs to respond to tweets containing a specific hashtag
- The bot parsed the tweet for the name of a commercial product and responded in real time with its nearest retail location

Prosthetic Arm Model - Queen's University Sept. 2016 - Oct. 2016

- Modeled a prosthetic arm using MATLAB
- Performed creep, stress, tension and force analyses to determine suitable materials for implementation
- Researched and compared real world data against model to ensure highest level of accuracy
- Compiled all results into a 15-page report detailing the process, including the factors considered, the assumptions made, graphed results of the analyses and final results