Sean D'Souza

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Education

University of Ottawa / BASc. in Software Engineering   **SEPTEMBER 2019 - DECEMBER 2023**
Relevant Coursework: Computing, Software Engineering, Technical Report Writing, Calculus, Linear Algebra

Work Experience

Junior Software Developer / Work, Co-Op / CENX   **OTTAWA: JULY 2018 – AUGUST 2018**
- Modified and extended a CLI program written in Python that summarizes gigabytes of FunkLoad test data from XML logs by improving runtime by 200% and is used by 1 engineer when attempting to identify bugs in the product when manually testing
- Created a graphing program in Python and AWK that visualizes daily system logs (SAR) used by 2 engineers when assessing performance metrics
- Refactored, fixed and restored an HTTP and WebSockets integration test to evaluate if any data was lost in between the client and the backend, which proved the existence of a bug in the product

Additional Experience

Tech Lead / Side Project / vscout   **JUNE 2019 – PRESENT**
- Designed and developed open source scouting software for VEX robotics written in Dart using Flutter and Sembast (NoSQL persistent store database)
- Designed to be serverless with P2P data transfer over a LAN for synchronization between individual databases on each client (mobile phone, tablet, or computer)
- Set up continuous integration (CI) to ensure high code quality for production
- Assigned stories to 2 developers, while verifying design and setting feature decisions with deadlines

Front End Developer / Hackathon / BoardTeX   **HACK THE NORTH (WATERLOO): SEPTEMBER 2019**
- Developed and designed the UI for an application in React JS with Redux and Material UI that uses the Google Vision and Mathpix API for optical character recognition (OCR) to convert images of math and computer science notes into LaTeX, a language for typesetting technical documents

Back End Developer / Hackathon / Autosurance   **HACK THE 6IX (TORONTO): AUGUST 2019**
- Created an application that speeds up the auto insurance claim process by identifying if a collision has occurred when given an image, and estimating the refund of a client based on their account details
- Used Python, Flask and AWS S3 Buckets with AWS Lambda to upload resized images to the cloud

Software Engineer / VEX Robotics / 2381C   **DECEMBER 2018 - APRIL 2019**
- Used C++, Python and the PROS library to program motion profiling and other control algorithms to control our team's robot during competitions; we ended up attending the provincial championship

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- Mentor and software advisor for high school VEX robotics organization consisting of 7 teams
- Lead Executive of Coding Club in high school
- Participant in 3 hackathons, which taught me **machine learning**, **React JS**, **Flask** and **AWS**
- Personal website - React JS; acn-bot, patrickbot – **Discord** library in Python; Arch Linux
- Languages: **Python** (proficient), C++ (moderate), Dart (basic), JS (basic)
- References are available upon request