

# Arushan Sinnadurai

275 Via San Marino St | Nepean, ON, K2J 5X9 | 613-867-3300 | [arushan.sinnadurai@gmail.com](mailto:arushan.sinnadurai@gmail.com)

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## EDUCATION

**Bachelor of Engineering, Biomedical and Electrical Engineering**  
*Carleton University, Ottawa ON*

September 2016 – June 2021

## WORK EXPERIENCE

### **Associate Data Engineer**

July 2021 – Present

*8x8 Inc, Ottawa, ON*

- Designed and implemented real-time and non-real-time ETL data pipelines using streaming technologies such as Kafka and Flink
- Owned and delivered three major UI features to Fuze View using the Ember.js framework
- Designed and developed a testing framework and standard to improve the quality of the code produced
- Built and operated distributed systems for data extraction, ingestion, and processing of large data sets

### **Software Test Developer Intern**

September 2019 – September 2020

*Kinaxis, Ottawa, ON*

- Developed automation test cases using Junit, Scripts, and running tests on the eclipse environment
- Created microservice to move data smoothly and efficiently into the RapidResponse database
- Used cutting-edge microservice architecture through technologies such as Kafka, Docker, Kubernetes, Helm

### **Software Implementation Support**

May 2019 – September 2019

*University of Ottawa Heart Institute, Ottawa, ON*

- Provided on-site technical support for the Electronic Health Information System EPIC
- Aided in the integration, troubleshooting and implementation of the software system
- Assisted administrative staff and technologists to complete registration, booking, and documentation for cardiac imaging tests
- Analyzed workflows to determine efficient use of health information system software and developed best practices for diagnostic imaging documentation

### **Quality Assurance Technician**

September 2015 – February 2015

*Magmic inc, Ottawa ON*

- Reviewed quality specifications and technical design documents to provide timely and meaningful feedback
- Developed and applied testing processes for new and existing products to meet client needs
- Responsible for identifying, recording, and documenting reports to thoroughly track bugs
- Improved company workflow by accurately documenting reports to track bugs

## APPLIED PROJECTS

### Software Developer

September 2020–December 2020

*Carleton University Drug-Target Interaction Prediction*

- Co-developed a drug-target-interaction regression model based on Extreme Gradient Boosting to predict binding affinities given protein sequences and drug SMILES representations for COVID-19 drug research
- Applied machine learning techniques and strategies such as SMOTE and under-sampling to mitigate the effects of a large class imbalance
- Improved model performance with hyperparameter tuning techniques such as cross validation and random search
- Explored meta-learning techniques such as bagging and boosting for improving model performance

### Electrical Engineering Student

September 2017 – January 2018

*Carleton Planetary Robotics Team, Ottawa ON*

- Working with a team of engineering students to construct a rover that will satisfy all the necessary requirements to compete in the University Rover Challenge 2018
- Participated in design review meetings to brainstorm a new, modular electrical system for the rover to facilitate the repair or replacement of electrical components
- Soldered, crimped, and heat-shrunk wiring connections to various parts of the rover

## SKILLS & ABILITIES

### Technical Skills

- Designed multiple different programming scripts using Java, Scala, and Python to solve various problem like projectile motion so it shows strong background in computer programming concepts
- Developed project that handles several data structures like linked list, stacks and queues using C and java languages, therefore showing a deeper understanding in computer programming concepts
- Developed projects that deal with interactive graphical user interfaces (GUIs) and movement control with key listener interfaces through java, such as snakes and ladders, thus showing a deeper understanding in the java language
- Created a 3-D model of a flowerpot using PTC CREO which self water the plant for a reverse engineering project.
- Programmed many MATLAB scripts that analyzed numerous sets of data using engineering statistical and numerical methods to formulate solutions to real-life engineering problems
- Constructed circuits and operated oscilloscopes, voltmeters, and breadboards in academic, laboratory settings to complete Carleton's Electromagnetism & Wave Motion Course
- Skilled with Microsoft Office programs such as Word, PowerPoint, and Excel
- Experienced with Microsoft Office Suite, including MS Word, MS Excel, and MS Powerpoint

INTERESTS: Volleyball; Tennis; Basketball; Hiking; Travelling; Business Books and Magazines; Networking

