Arushan Sinnadurai

275 Via San Marino St | Nepean, ON, K2J 5X9 |613-867-3300| arushan.sinnadurai@gmail.com

EDUCATION

Bachelor of Engineering, Biomedical and Electrical Engineering September 2016 – Present
Carleton University, Ottawa ON

- 4nd year undergraduate,
- Official Convocation Ceremony – June 2021

WORK EXPERIENCE

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 Electronic Health Information System
- 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–December 2015
Magmic, 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

Project Manager September 2020 – April 2021
Carleton University Capstone Project

- Collaborated with and managed a team of biomedical engineering students under the supervision of Dr. Yuu Ono for a fourth-year capstone engineering project
- The main objective of this project is to create a cost-effective and accurate posture monitoring system for forward head posture.

- Performed research and literature review on forward head posture an indicator of bad posture
- Developed a CNN algorithm to track and monitor the forward head posture of the user.

Drug-Target Interaction Prediction September 2020–December 2020
Carleton University

- 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 Team Member September 2017 – Present
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-shrinked wiring connections to various parts of the rover

SKILLS & ABILITIES

Technical Skills

- Designed multiple different programming scripts using C, Java, C++, Python and JavaScript 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