
EXPERIENCE

- **Research Assistant** Toronto, Canada
University of Toronto *May 2020 - Present*
 - Post-graduate researcher in Bell Multimedia Laboratory in collaboration with LG Science Park (LGSP, Seoul) working towards decoding complex Machine Learning classification and detection models.
 - Developing novel eXplainable AI (XAI) algorithms with potential patentability to be integrated along with LG's existing state-of-the-art industrial defect identification ML models.
- **Systems Engineer** Bangalore, India
Infosys Limited *May 2016 - July 2018*
 - Backend developer for the UK region of AIMIA (formerly Groupe Aeroplan) - a data driven loyalty analytics company based out of Montreal.
 - Developed and maintained multiple MySQL stored procedures in the relational DB management system server.
 - Managed several diverse sensitive banking data regarding retail and logistics, and worked on automating (RPA) numerous periodic IT processes through the ActiveBatch tool.

EDUCATION

- **University of Toronto** Toronto, Canada
Master of Engineering in Electrical & Computer Engineering (ECE); GPA: 3.97/4.00 *Sept. 2018 - Apr. 2020*
- **Anna University** Chennai, India
Bachelor of Engineering in Electrical & Electronics Engineering (EEE); cGPA: 8.54/10.00 *Aug. 2012 - Apr. 2016*

PROJECTS

- **Student Engineer, aUToronto** *Jan. 2020 - June 2020*

Worked in the Simulation and Experimentation team of aUToronto (U of T's self-driving car team) to build virtual scenarios for the ego vehicle to drive through, thereby testing the pedestrian detection and tracking algorithm by exporting the sensor data to ROS environment.
- **Explainable Artificial Intelligence for Visual Defect Inspection** *Sept. 2019 - Apr. 2020*

Developed and studied XAI algorithms that generate saliency maps according to the importance of each corresponding pixel towards the Machine Learning model's predictive accuracy, intending to unravel complex 'black-box' models.
- **3D Object Detection and Tracking** *Sept. 2019 - Dec. 2019*

Vision sensor data (RGB and Depth) collected from a semi-humanoid robot 'Pepper' provided by IATSL laboratory, are used to perform 3D human detection and tracking within a household setup enabling better assistance to old or sick-adults in home-care.
- **LiDAR and IMU Calibration** *Jan. 2019 - Apr. 2019*

Worked on a 6 DOF non-linear optimization problem to determine the pose vector relating an Inertial Measurement Unit (IMU) to a LiDAR sensor based on the data collected on Zeus self-driving car during its operation.

ACTIVITIES

- Peer mentor for incoming international grad students under the iConnect program of CIE during the year 2019-20.
- VP Communications of the ECE Graduate Students Society (ECEGSS) for the academic year 2018-19.
- Campus Ambassador at the Academic and Campus Events (ACE) and a part-time usher at the convocation hall.
- Academic coordinator for the department of EEE during undergrad, acting as a liaison between faculty and students, and leading a team of 50 members to the coveted inter-departmental championship shield.

PROGRAMMING SKILLS

- **Languages:** Python, C++, SQL, C#, HTML
- **Softwares & Tools:** MATLAB, TensorFlow, Keras, PyTorch, OpenCV, SQL Server, L^AT_EX, Git, ROS, Gazebo