Elton Lemos

eltonlemos2411@gmail.com | +1-5513289693 | <u>LinkedIn</u> | <u>Github</u> | <u>Google Scholar</u> | <u>Website</u>

WORK EXPERIENCE

Research Assistant - University at Buffalo, Center for Embodied Autonomy and Robotics, Buffalo.   Jan 2024 - Present

- Led the R&D of SLAM, Planning, and Diagnostics modules for the Excavator Automation project, secured with a $750,000 funding from MOOG.
- Developed an optimized ROS2 Diagnostic node in Python that enhanced team-wide debugging capabilities, resulting in reduced debugging effort and a 60% increase in productivity.
- Eliminated the need for cross-compilation of FAST-LIO localization ROS2 ML library through Dockerization, thus ensuring reusability and seamless deployment on simulators and development boards.

AIOps Product Engineer - LTIMindtree, Automation and Centre of Excellence, Mumbai.   Oct 2020 – Jul 2023

- Led a four-member team in the development of a flagship business analytics tool; <u>Canvas Insights</u>, which automated the ticket analysis process, delivering actionable insights and generating custom dashboards for 150 CXOs across 50 accounts.
- Designed and developed a RASA based NLU query engine named 'Ask Tiki' for the Canvas Insights tool, which became one of the three core features of the tool, contributing to 70% of customer acquisition.
- Developed plugins which enable Canvas Insights tool to receive millions of data entries from various ITSM sources like Excel sheets and ServiceNow MID servers, increasing its usability.
- Designed a On-Demand, time sharing, containerized Machine Learning server for the tool, saving the team $17,000 annually.
- Developed a seasonality detection and trend prediction model for time series data in ITSM tickets which resulted in discovery of 17 new actionable insights that were added to the tool.
- Enhanced application performance through Dockerization, PostgreSQL database optimization and seamless Django API - Vue.js integration, achieving a 200% reduction in response time and a 55% increase in user interaction.
- Coordinated with clients and on-boarded teams to develop automation workflows that reduced client-side tool deployment time by 66% (from 3 months to mere 2 weeks).

SKILLS

Programming Languages: Python, C++, Bash.
Frameworks/OS: Linux, Django, Flask, Windows, Docker, Kubernetes.
Cloud: AWS, Azure.

ML / AI: Tensorflow, Pytorch, LLM, Transformers, Q-learning, Recommendation algorithms, XG-BOOST.
Software Engineering: REST-SOAP APIs, Database Management.

EDUCATION

University at Buffalo, Master's of Science in Engineering Sciences   Aug 2023 - Dec 2024

University of Mumbai, Bachelor's of Engineering in Computer Engineering   May 2016 - Oct 2020

PROJECTS

No-Code Image Classification Playground (Machine Learning, Computer Vision, Python, Flask)   **Github Link**

- Developed a no-code image classification platform during a hackathon, enabling users to customize machine learning pipelines and parameters for training and testing models without requiring Python expertise.
- Designed a dynamic and self-correcting pipeline for creation of custom CNN and ANN as well as integration with existing scikit-learn image classification and clustering libraries.
- The team's unique take on the problem statement resulted in achieving 10th place among 72 participating teams.

Autonomous F1/10th Car (Reinforcement Learning, Python, Unity)   **Github Link**

- Designed Q-learning Reinforcement learning algorithm to race an autonomous F1 car, similar to AWS DeepRacer in Unity.
- Secured 1st place position at the class race among 60 participants.

AI Pet Robot - Project Demo: <u>Youtube link</u>   **Github Link**

- An autonomous pet robot that can recognize, track, follow and interact.
- Awarded **Best Project** at XIE Bachelor's Project Exhibition, Mumbai.
- Secured podium position for Projects under Computer Science at Symbiosis, Pune.
- OpenCV Image Processing for AI Pet Robot - Published in IJASST.
- Hardware Architecture and Implementation of an AI Pet Robot - Published in IJASST.