Adrian Malaran

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4 MONTHS | **TERM**

TECHNICAL SKILLS

Software Languages/Frameworks: C++ | Java | Python | Javascript | HTML5 | CSS | Angular | React | Node | ROS | OpenCV
Software Environments/Tools: Android Studio | Unity | Arduino | Windows | macOS | Linux

ENGINEERING EXPERIENCE

Robotics Software Developer   Jan '18 – Apr '18
Avidbots - Waterloo, Ontario

- Researched and implemented alternative path finding algorithms (A*) for autonomous mobile robot in ROS
- Designed and implemented backend ROS framework controls to dynamically override robot configurations during autonomy leading to productivity, safety, and user control enhancements
- Effectively reduced company workload by fixing robot simulation collision detection using OpenCV image processing
- Ensured software structure robustness by revising low-level logic to prevent system crash failures in production

Front-end Software Developer   May '17 - Aug '17
Sears Canada, Initium Commerce Labs - Toronto, Ontario

- Delivered mission-critical fixes to major components of e-Commerce platform reaching +100,000 customers
- Reduced site-wide load times by 38% by revising pipeline infrastructure and reintegrating use of RESTful APIs
- Increased conversion rates by recreating user interface with React and semantic HTML to improve SEO
- Effectively reduced company expenses by refactoring legacy code and creating features for new system architecture

Back-end Software Developer   Sep '16 - Dec '16
BlackBerry - Waterloo, Ontario

- Developed features for BlackBerry's cloud-based data storage system powering applications for +1,000,000 users
- Increased data query speed up by 400% by creating alternative data relay method to remove database dependencies
- Enhanced system security by developing internal APIs for more robust communication between authentication nodes

Full-stack Software Developer   Jan '16 - Apr '16
BroadConnect Telecom - Toronto, Ontario

- Developed new features in Python on enterprise level software to enhance program functionality for consumers
- Improved customer interaction experience by emulating real-time user to user interaction by implementing a messaging system with Websockets
- Embedded RESTful APIs (Twilio/Facebook) to develop expansive features on the tooling platform

PROJECTS

Autonomous Robot Racing Design Team 2018   Mar '18

- Implemented a traffic light detection ROS node using a neural net based object classifier, which significantly reduced the previous false positive rate

Frontier Explorer | Mobile Robot   Mar '18

- Programmed navigational ability using SBPL for a mobile robot to autonomously map unexplored regions (hector)
- Implemented algorithm to detect highest priority frontier to explore based on distance, vehicle orientation and location of other frontier nodes

EDUCATION

UNIVERSITY OF WATERLOO | 3A Mechatronics Engineering

- President's Scholarship of Distinction (Awarded to Applicants with a 95%+ Average)
- Winner of EATON's Awards for Academic Achievement scholarship from Electro-Federation Canada

Relevant Courses: Machine Learning (Coursera, Stanford)| Real-Time Systems | Data Structures and Algorithms

Avidbots

" Adrian was an enthusiastic, fast-learning, and motivated member of the coverage path planning team at Avidbots. In the span of four months, he was able to become acquainted with and contribute to six different project areas, ranging from image processing, geometry, ROS, debugging, path planning logic, and high-level robot instruction generation. Adrian always put in extra effort to help team members complete solutions to challenging robotics problems. He was always exploring the concepts that could advance the areas of work he was involved in. "

   -Kenneth Lee, Supervisor and Principal Software Developer

Sears Canada, Initium Commerce Labs

" Adrian embodies the traits that will make up the future of our field. He is intelligent, adaptive, and eager to learn any new technologies that we give him. He demonstrated a high capacity to tackle challenges in legacy code and in constructing new systems on the e-Commerce platform and, as a result, has accelerated our team's velocity in completing sprint items. I am very happy with his performance here, he is sure to succeed wherever he goes with his skills and mindset. "

   -Geoffrey Lee, Supervisor and Senior Software Architect

BlackBerry

" Adrian was an excellent addition to the Olympia team at BlackBerry. Even with a short time, he was able to impact the team's productivity and efficiency. His help enabled us to meet our deadlines and the changes he implemented will save the company OPEX and support time.

Adrian was taking on tasks that were more complex and have a large impact on the service that we support. I was very impressed with his contributions to the team. "

   - John Stager, Team Manager and Senior Software Architect