Amir Ebrahimnezhad

Edmonton, AB (Willing to Relocate)| ebrahimnezhad@ualberta.ca | linkedin.com/in/ebrahimamir

Robotics Developer

Experienced software engineer and robotics developer, developed three ROS packages for industrial crane control, UAV simulation and autonomous pursuit. Proficient in C++, Python and deep learning packages.

EDUCATION

University of Alberta — Edmonton, AB
Master of Science — Sep 2020 – Apr 2023
Mechanical Engineering
Thesis: Deep Learning in Autonomous UAV Pursuit; Cumulative GPA: 3.8/4.0

K. N. Toosi University of Technology
Bachelor of Science
Electrical Engineering
Cumulative GPA: 3.44/4.0

WORK EXPERIENCE

Mechatronic Systems Lab — Edmonton, AB
Software Engineer — Sep 2020 – to date
- Developed three C++/Python/PyTorch libraries for novel 3D bounding box detection and state estimation
- Implemented real-time vision-based pose and state estimation algorithms
- Performed novel real-time UAV pursuit algorithms

University of Alberta — Edmonton, AB
Safety Associate — Jul 2022 – Apr 2023
- Inspections of laboratories to verify safe practices, inspection, and authorization of certain laboratory equipment.
- Workplace violence, harassment prevention and hazardous waste management.
- Supervising and performing transfer of dangerous goods.

SELECTED PROJECTS

Anafi ROS
- Developed a ROS package in C++ and Python for UAV control and pursuit.
- Real-time pose estimation, state estimation, autonomous control and pursuit of target drones.
- Real-time object detection and 3D bounding box estimation using PyTorch.

Baxter ROS
- Co-developed a ROS package in C++ and Python for a 16-DoF Baxter robot control and angle estimation.
- Real-time pose, state and angle estimation in addition to control and position control of the Baxter.

VOLUNTEER EXPERIENCE

ISAUA — Edmonton, AB
Vice President Finance
- Overseeing ISAUA's annual budget, incomes, costs, and expenses.
- Negotiating with the sponsors and investors.
- Overseeing ISAUA's financial strategy and operations costs.

LANGUAGE SKILLS

English: Fluent
French: Intermediate

TECHNICAL SKILLS

General: SLAM, Computer Vision, Deep Learning, Teamwork, State Estimation, PCL
Languages: C, C++, C#, Java, Python, SQL, Ladder, SCL, MATLAB
Libraries: PyTorch, Keras, Tnesorflow, NumPy, Matplotlib, CV2, Eigen, TF
Tools: Git, Docker, AWS, Gitlab CI, Linux, Olympe, Sphinx, MAVROS, MAVLINK, ROS, Gazebo, OpenCV