Benjamin Young

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OBJECTIVE

I am a first-year graduate student in search of summer internship in robotics, computer vision, or machine learning.

EDUCATION

University of Michigan Ann Arbor, MI

Masters of Science in Electrical and Computer Engineering Sept. 2021 - Dec. 2022

- Concentration: Robotics

University of Michigan Ann Arbor, MI

Bachelor of Science in Computer Engineering (GPA 3.7 / 4.0) May 2021

- Notable Coursework: Data Structures and Algorithms, Machine Learning, Computer Vision, Autonomous Robotics, Linear Algebra, Logic Design, Embedded Systems

WORK EXPERIENCE

Southwest Research Institute San Antonio, TX

Graduate R&D Intern May 2021 - Aug. 2021

- Implemented reinforcement learning algorithm to facilitate trajectory planning of robotic arms in tightly constrained spaces.
- Designed configuration interface for motion planning and optimization packages.

Marvell Technology Group Ltd. Marlborough, MA

Embedded Software / Design Automation Intern June 2020 - Aug. 2020

- Designed and implemented asynchronous callbacks for a multithreaded pre/post silicon validation Linux application to reduce callback latency by 99.8%.
- Redesigned Python API for the validation framework in C++ to be event driven for scalability.

PROJECT EXPERIENCE

Northrop Grumman Space-based Robotic Truss Construction Project Jan. 2020 - Dec. 2020

- Collaborated with mechanical engineering team to design autonomous robotic arms to assemble trusses in zero-gravity using minimal degrees of freedom.
- Used C++/Python with Robot Operating System (ROS) to develop modular computing cluster to run inverse kinematics, motion planning, and computer vision on a mobile platform.

A Semi-Supervised RNN Model for Mobile Robot Path Planning Fall 2020

- Designed deep learning model for semantic image segmentation using semi-supervised learning to compute travel affordances.
- Used recurrent neural network to compute valid paths to be taken by mobile robot.

SKILLS

- Languages: C/C++, Python, Verilog, ARM Assembly, MATLAB
- Libraries: Pytorch, tensorflow/keras, OpenCV, numpy, pandas, ROS