Andy Lambert

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EDUCATION

Massachusetts Institute of Technology - GPA: 4.6/5.0 **Cambridge, MA**
Candidate for Bachelor of Science in Electrical Engineering and Computer Science **2017 - 2022**

- *Relevant Coursework:* Robotic Manipulation, Feedback System Design, Robotics: Science & Systems, Intro. to Machine Learning, Circuits & Electronics, Elements of Software Construction, Signals, Systems & Inference

EXPERIENCE

Pickle Robot, Co. **Somerville, MA**
Junior Member of Technical Staff **Jun. 2020 - Sep. 2021**

- Designed a novel reinforcement learning algorithm to automate single and mixed-case palletizing with a robotic arm in Python
- Spearheaded the design of sensor calibration techniques using non-linear optimization methods and kinematic data
- Deployed 2 robots in logistics warehouses and worked with warehouse associates to augment their workflow and promote them to more fulfilling positions, rather than replace valuable human labor. Communicated in Spanish with associates.
- Optimized robot motion controllers to automate truck unloading tasks at 1600 parcels per hour and outbound sorting tasks at rates of 700 parcels sorted per hour

Built Robotics, Inc. **San Francisco, CA**
Robotics Intern - Perception Team **Summer 2019**

- Improved the safety of autonomous construction vehicles by validating and improving pedestrian detection neural networks (RetinaNet & Mask R-CNN)
- Utilized OpenCV to reduce false positives due to human-like objects in a construction site with classical computer vision

MIT CSAIL **Cambridge, MA**
Undergraduate Researcher - Distributed Robotics Laboratory **Spring 2019**

- Designed a new path planning algorithm for a robot equipped with a drill and jigsaw for autonomous wood cutting in Python

Cognex Corporation **Natick, MA**
Software Engineering Intern **Summer 2018**

- Automatically filtered periodic noise from customer images in the frequency domain for better defect detection in C++

TEACHING + MENTORSHIP

Teaching Assistant **Sept. 2021 - present**
Introduction to Programming in Python (6.0001/2)

- Guided 500 first-time programming students with assignments in both in-person and remote office hours
- Graded student work both manually and by giving students oral assessments
- Designed and debugged problem set questions

MIT Sport Taekwondo **Sept. 2020 - present**
Instructor

- Mentored 2 beginner athletes individually for 1 hour per week to help them excel in Taekwondo competitions
- Instructed over a dozen intermediate athletes on Taekwondo curriculum to prepare them for competitions and belt tests

LEADERSHIP

MIT Sport Taekwondo
President, Vice President, Treasurer **Jun. 2018 - Jun. 2021**

- Encouraged team cohesion among 50 athletes both in-person and remotely, planned tournaments, communicated with other teams to host events**,** budgeted for the year, processed reimbursements, purchased transportation

MIT-Wellesley Toons Acapella
Music Director, President **2018 - 2020**

- Lead rehearsal, conducted and arranged music, held auditions, organized concert repertoire

SKILLS

- *Programming languages:* Python (high proficiency), Java (high proficiency), C/C++ (med. proficiency), MATLAB (med. proficiency)
- *Other Skills:* Git (7 years experience), Unix command line, computer vision, robot kinematics, Robot Operating System (ROS), soldering/wiring, control theory, signal processing, Spanish (proficient)