

Justin Yu

617-957-0655 | justinyu.dev | justinyu@mit.edu

EDUCATION

Massachusetts Institute of Technology

Technical GPA: 4.8/5.0

Sept 2018 - Dec 2022

- Candidate for Bachelor of Science, Major in Computer Science and Engineering, Minor in Linguistics
- **Relevant Courses:** Design and Analysis of Algorithms, Machine Learning, Computer Systems Engineering, Computational Psycholinguistics, Signal Processing, Intro to Inference, Nanoelectronics and Computing, Embedded Systems

EXPERIENCE

NVIDIA Applied Deep Learning Team

June 2020 - Aug 2020

Research Intern • Computer Vision

- Explored synthetic data generation and motion synthesis methods for body pose estimation and action recognition
- Fine-tuned body pose estimation models for fall detection, optimizing latency and increasing OKS accuracy by > 10%

HackMIT DevOps Team

Mar 2019 - Present

Team Lead • Full Stack Development

- Maintain suite of 12+ open source web apps that facilitate hackathon organization, used by dozens of hackathons in the US
- Building infrastructure with Amazon EC2 and Ansible to automate deployment tasks and improve data flow between apps

NLP Group at MIT CSAIL

Sept 2018 - May 2020

Undergraduate Researcher • Natural Language Processing

- Working towards debiasing current fact-verification models and improving performance of FEVER dataset
- Building neural network for semantic-intent classification of Wikipedia edits as a method of evaluating meaningful data
- Built web-based tool for annotating videos to apply question-answering technology to MOOC content

Dexai Robotics

Jun 2019 - Aug 2019

Software Engineering Intern • Computer Vision and Controls

- Implemented methods for human detection, localization and pose estimation using MaskRCNN and depth camera data
- Designed and built safety system that detects and localizes human activity inside operation space of service robots, implemented controlled stops on 7 axes robot arm to improve customer safety and maintain ISO compliance

Accion Systems

Jul 2017 - Aug 2017

Software Engineering Intern • Firmware and Data Processing

- Improved data processing GUI for satellite thruster chip test analysis using Python data visualization and scientific libraries
- Built custom bootloader and boot interface using Assembly and C for reprogramming satellite thruster chips live in space

PROJECTS

(More projects at justinyu.dev)

Dormsp.am

Jan 2019 - Jan 2020

- Unified calendar that aggregates all student events by automatically scraping campus-wide emails and extracting key information using NLP. Implemented with React, Flask, AWS and PostgreSQL

MAHacks

Aug 2016 - May 2018

- Founder and director of regional MA hackathon for high school students, organized three hackathon events with hundreds of attendees, raised \$5000+ in sponsorship for each event

HONORS/AWARDS

HackRPI

March 2019

2nd Place Overall, Best Data Privacy Hack

Botball Robotics

April 2018

1st Place Overall at New England Tournament

MIT Blueprint Hackathon

March 2017

3rd Place Overall

LiHacks

August 2016

2nd Place Overall

Botball Robotics

June 2015

1st Place at Global Conference for Educational Robotics

SKILLS

Languages: Python • Javascript • C++ • Java

Web Development: Flask • Django • React • PostgreSQL

Machine Learning and NLP:

PyTorch • Keras • NLTK • Sci-Kit Learn • Amazon Turk

Robotics/Other: ROS • LCM • Bluespec • Docker

ACTIVITIES

HackMIT Dev Team • Machine Intelligence Community Devops •

Webmaster of MIT IEEE/ACM • Webmaster of Theta Xi