Justin Yu

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EDUCATION

Massachusetts Institute of Technology
Technical GPA: 4.8/5.0 **Sept 2018 - Jun 2021**

- Candidate for Bachelor of Science, Major in Computer Science and Engineering, Minor in Linguistics
- **Relevant Courses:** Advanced Algorithms, Intro to Machine Learning, Computational Structures, Computational Psycholinguistics, Signal Processing, Intro to Inference, Nanoelectronics and Computing, Language and Syntax

EXPERIENCE

NVIDIA Applied Deep Learning Team
June 2020 - Aug 2020

Research Intern • Natural Language Processing and Computer Vision

- Exploring synthetic data generation and motion synthesis methods for body pose estimation and action recognition
- Fine-tuning body pose models for fall detection for the Clara Guardian patient monitoring system

HackMIT DevOps Team
Mar 2019 – Present

Director • 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
Aug 2019 - Present

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

Dexai Robotics
Jun 2019 - Aug 2019

Software Engineering Intern • Computer Vision and Controls

- Implemented convolutional neural network for human detection, localization and pose estimation
- Designed and built ISO-compliant safety system for service robots using depth cameras, computer vision, and controls that will be integrated into final consumer product and servicing all customers

InfoLab at MIT CSAIL
Sept 2018 - Jun 2019

Undergraduate Researcher • Full Stack Development and Data Processing

- Built web-based tool for annotating videos to apply question-answering technology to MOOC content
- Implemented sequence models to improve understanding of natural language queries for question-answering systems
- Engineered MTurk experiment to collect custom training dataset of annotated sentences

Accion Systems
Jul 2017 - Aug 2017

Software Engineering Intern • Data Processing and Systems

- 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

(Demos at www.jsyu.me)

HackMIT Appreader
Jul 2019 - Present

- Web app to automate, manage, and gamify the internal HackMIT application reading process. Oversees distribution of 5000+ applications to graders and reports progress. Implemented with React, Flask, Semantic UI and PostgreSQL

Dormsp.am
Jan 2019 - Present

- 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

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 • Semantic UI
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