TIFFANY YU

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EDUCATION

Carnegie Mellon University   **May 21**
BS Computer Science
Machine Learning Minor

SKILLS

Languages: Python, Java, Matlab, Swift
Technologies: Pytorch, Spark, Docker, Android Studio

COURSEWORK

Deep Reinforcement Learning	10703
ML and Sensing	17728
ML for Structured Data	10418
Intro to Computer Vision	16385
Robot Kinematics and Dynamics	16385
Discrete Differential Geometry	15458
Algorithm Design and Analysis	15451
Computer Graphics	15462
Database Systems	15445
Intro to Computer Systems	15213

INVOLVEMENT

HSSP Robot Arm Course   **Jun – Aug 21**
Co-Instructor
- Designed beginner-friendly labs from scratch using pybullet to introduce high school students to robotics in MIT's 6-week summer program through "Programming Robot Arms to Move Objects" offering.

CMU Robotics Club   **Apr 18 – Apr 21**
Project Liaison, Vice President, Treasurer
- Oversaw several efforts to improve makerspace environment and conducted weekly office hours.
- Led Red Robot Hackathon 2018-2020 planning (challenge design, hardware purchasing, event logistics, people wrangler) in both in-person and virtual settings.

2019 WRO USA   **Sep 19**
Emcee
- Provided relevant robotics commentary for over 100 K-12 robotics teams at World Robotics Olympiad US Championships.

Robobuggy   **Sep 17 – Dec 18**
Operations Lead, Electrical Team
- Assisted development of electrical subsystems on autonomous / tele-operated buggy.
- Coordinated team through test runs under race day conditions.

WORK EXPERIENCE

Uber   **Jun 21 - Present**
Risk Applied Machine Learning, Software Engineer, Remote
- Developed and deployed model to identify suspicious payment profiles added to user accounts with millions in annualized loss savings.
- Contributed to Uber's semi-automated fraud detection and mitigation response platform as one of its primary developers (see co-authored Uber Engineering blogpost for more information).
- Led collaboration with analyst teams to gain deeper understanding of fraud trends.
- Co-developed course on Uber's machine learning platform's training and performance monitoring tool given to 20+ engineers to encourage widespread adoption in Uber's ML community.

Uber ATG   **Jun – Aug 20**
Track Hardware, Software Engineering Intern, Pittsburgh, PA
- Designed and implemented triggering of robotic actors based on autonomous vehicle geolocation during scenario testing using simple and intuitive iOS interface.
- Shipped working product to test track and validated in several physical test scenarios.

Facebook   **Jun – Aug 19**
Public Connections, Software Engineering Intern, Menlo Park, CA
- Designed, developed, and tested contextual profiles for all public page comments in FB Android.
- Launched employee A/B test to better understand user interaction with feature.

PROJECTS

Benchmarking Sample-Efficient TD3   **Dec 20 – Feb 21**
Team of 2, Pittsburgh, PA
- Benchmarked prioritized and hindsight replay with reinforcement learning algorithms in OpenAI Gym for sparse-reward environments. (see published blogpost here).

ML-Assisted Dead Reckoning   **Nov – Dec 20**
Team of 4, Pittsburgh, PA
- Developed E2E ML pipeline (data collection, data preprocessing, feature engineering, and ML) from scratch for vehicle position estimation from IMU data in GPS-poor environments using the DAgger algorithm.

Facebook University: GetRecced   **Jul – Aug 18**
Team of 3, Menlo Park, CA
- Engineered an Android media recommendation app to connect users to movies, TV shows, and books.

HackCMU: Ugly Duckling   **Sep 17**
Team of 3: Pittsburgh, PA
- Constructed an autonomous camera operator by integrating CV face-recognition software with a Roomba.
- Won Google-sponsored Best Use of Machine Learning at HackCMU and "I Built" category at CMU's 50th anniversary celebration.