TIFFANY YU

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EDUCATION

Carnegie Mellon University	**May '21**
BS Computer Science	*3.4/4.0*
Machine Learning Minor	
Academic Dean's List	*S19, F19*

SKILLS

Proficient At: Python, Java, Matlab, Swift, Pytorch, Tensorflow, mobile development, Git
Familiar With: C/C++, Javascript, HTML, CSS, Docker

COURSEWORK

17336: Applied Distributed Systems	**S21**
15458: Discrete Differential Geometry	**S21**
10703: Deep Reinforcement Learning	**F20**
15445: Database Systems	**F20**
17728: ML and Sensing	**F20**
15451: Algorithm Design and Analysis	**S20**
15462: Computer Graphics	**S20**
10418: ML for Structured Data	**F19**
15330: Intro to Computer Security	**F19**
16385: Computer Vision	**S19**

INVOLVEMENT

CMU Robotics Club	**Apr '18 – Present**

Project Liaison (current), Vice President, Treasurer, Pittsburgh, PA

- Oversaw several efforts to bolster club membership and improve makerspace environment.
- Communicated between club-sponsored projects to provide logistical support.
- Ran Red Robot Hackathon 2018-2020 with Roboclub officer board. Coordinated purchasing for 2018, achieved 100% retention from 2019 participants, and spearheaded remote shift in 2020.

2019 WRO USA	**Sep '19**

Emcee, Sunnyvale, CA

- Energized over 120 K-12 robotics teams and a crowd of ~1000 spectators across two days of WRO USA National Championships.
- Provided relevant robotics commentary during matches.

Robobuggy	**Sep '17 – Dec '18**

Operations Lead, Electrical Team, Pittsburgh, PA

- Assisted development of electrical subsystems on buggy.
- Coordinated team through test runs under race-day conditions.

WORK EXPERIENCE

Uber ATG	**Jun – Aug '20**

Software Engineering Intern, Pittsburgh, PA

- Developed iOS feature that enabled track technicians to set robotic actors to trigger based on autonomous vehicle geolocation during scenario testing.
- Shipped beta version of trigger to test track and validated in real scenarios.

Facebook	**May – Aug '19**

Software Engineering Intern, Menlo Park, CA

- Designed, developed, and tested contextual profiles for all public page comments in FB Android.
- Implemented logging for employee testing to understand user response.

RESEARCH EXPERIENCE

Independent Study	**Feb '21 - Present**

RA under Mayank Goel, Pittsburgh, PA

- Continuation of ML-Assisted Dead Reckoning (see *Projects* for more).

CHIMPS Lab: Coconut	**Jan '19 – Jan '20**

RA under Jason Hong, Pittsburgh, PA

- Expanded and tested Coconut annotations plugin for Android Studio IDE, which manages data privacy by manipulating developer workflow.
- Incorporated annotations with ~30 Google Play Store apps to gauge plugin efficacy.
- Presented preliminary findings at Cylab Partners Conference 2019.

PROJECTS   (see https://tyu91.github.io for more!)

Benchmarking Sample-Efficient TD3	**Dec '20 – Present**

Team of 2, Pittsburgh, PA

- Benchmarked prioritized replay and hindsight replay with TD3 algorithm in OpenAI Gym and custom environments.
- Publishing blogpost to share results with wider ML/RL community.

ML-Assisted Dead Reckoning	**Nov '20 – Dec '20**

Team of 4, Pittsburgh, PA

- Developed E2E ML pipeline (including data collection, data preprocessing, feature engineering, and ML) from scratch for vehicle position estimation from IMU data in GPS-poor environments.

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.
- Awarded over $3000 by CMU's Board of Trustees in "Shark Tank"-esque competition.