

Laura Zheng

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EDUCATION

University of Maryland

Computer Science PhD Student @ GAMMA Group ; Robotics and ML

College Park, MD

Aug. 2020 – Present

University of Maryland

B.S. in Computer Science

College Park, MD

Aug. 2016 – Dec 2019

PUBLICATIONS

Google Scholar

Traffic-Aware Autonomous Driving with Differentiable Traffic Simulation

- **Laura Yu Zheng**, Sanghyun Son, Ming Lin
- Under review at ICRA 2023. [Project Website](#)
- Implemented differentiable traffic simulation for deep learning frameworks, wrapper library for co-simulation between driving and traffic simulators, and generalizable method for acceleration optimization with objectives for social good

Gradient-Free Adversarial Training Against Image Corruption for Learning-based Steering NeurIPS 2021

- Yu Shen, **Laura Yu Zheng**, Manli Shu, Weizi Li, Tom Goldstein, Ming Lin

Enhanced Transfer Learning for Autonomous Driving with Systematic Accident Simulation IROS 2020

- Shivam Akhauri, **Laura Zheng**, Ming Lin ; [Project Website](#)

Understanding ML in Earth Science: A Natural Language Processing Approach

AGU 2019

- **Laura Zheng**, Arif Albayrak, William Teng, Mohammad Khayat, Long Pham

WORK EXPERIENCE

Data Science Intern

June 2019 - Aug 2020

NASA Goddard Space Flight Center / ADNET Systems

Greenbelt, MD

- Developed a publication metadata data collection pipeline for scientists at Goddard
- Applied named entity recognition and relationship extraction natural language processing models on research literature text for knowledge base construction
- Attended various Geoscience academic conferences to present my group's work

CRA-W DREU in Autonomous Driving

May 2019 – July 2019

University of North Carolina at Chapel Hill

Chapel Hill, NC

- Researched and developed vehicle accident scenarios in Unity Game Engine

COURSES TAKEN

Foundations of Deep Learning, Learning-based Modeling, Simulation and Animation

Fall 2022

Robotics, Differentiable Programming, Advances in XR

Fall 2021, Spring 2022

Advanced Numerical Optimization, Data Visualization

Spring 2021

Parallel Computing, Interactive Technologies/HCI, ML Guarantees and Analysis

Fall 2020

TECHNICAL SKILLS

Languages: Python, Java, C#, Racket, C/C++

OS: Linux, Mac OSX, Windows

Software and Frameworks: Unity, PyTorch, Lightning, Tensorflow, CARLA, SUMO

Developer Tools: Git, VS Code, Visual Studio, Eclipse, Sphinx Documentation, Anaconda, LaTeX