

## Ziyan (Annie) An

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**EDUCATION** *Bachelor of Science in Computer Science*, New York University, New York, NY, expected May 2022

**WORK EXPERIENCE** *Software Engineering Intern* Spring 2021  
Sunthetics, remote  
Mentor: Dr. Daniela Blanco

- Tested and optimized the clean energy startup company's active learning algorithm with sklearn and PyTorch to predict chemical reaction results with few (< 10) training points
- Compared performance of active learning algorithm with Bayesian optimization and neural networks on predicting chemical reactions

**RESEARCH EXPERIENCE** *Research Assistant* Fall 2020-present  
AI4CE Lab at NYU, Brooklyn NY  
Mentor: Dr. Chen Feng

- Develop Python programs to generate a large-scale, multi-agent, multi-modality cross-view autonomous vehicle dataset with open source software CARLA and Unreal Engine 4
- Design and implement a project mainpage with HTML and CSS to enable peer researchers to download the dataset

*Summer Research Assistant* Summer 2020  
NYU Civil and Urban Engineering Department, Brooklyn NY  
Mentor: Dr. Li Jin

- Implemented an auto-encoder with PyTorch for online traffic data imputation and reached a testing accuracy of 95 %
- Gathered, cleaned, and analyzed highway traffic data from Caltrans Performance Measurement System (PeMS) with pandas and NumPy
- Integrated new functionalities into calibrated cell transmission model (CTM) traffic simulator with Python

*Summer Research Assistant* Summer 2019  
NYU Mechanical and Aerospace Engineering Department, Brooklyn NY  
Mentor: Dr. Dzung Luong

- Developed a Python solution to analyze the trend of syntactic foam material stress and strain
- Researched for and implemented machine learning algorithms with scikit-learn and TensorFlow to predict syntactic foam stress and strain

**TEACHING EXPERIENCE** *Teaching Assistant for Intro to Operating Systems (CS 3224)* Fall 2021  
New York University, Tandon School of Engineering, Brooklyn NY

- Duties include holding office hours, planning and grading assignments, answering online student posts, and leading weekly review sessions

*Computer Science Tutor*

2020

NYU Polytechnic Tutoring Center, Brooklyn NY

- Subjects included Programming and Problem Solving (CS 1114) and Data Structures (CS 1134)
- Instructed a group of up to 5 students at a time on Python programming for 10 hours a week
- Held exam review sessions collaboratively with other tutors for 50+ students per meeting

**PUBLICATIONS** Li, Y., **An, Z.**, Wang, Z., Zhong, Y., Chen, S., & Feng, C. (2021). V2X-Sim: A Virtual Collaborative Perception Dataset for Autonomous Driving. Simulation Technology for Embodied AI (SEAI), ICCV Workshop, accepted on Aug. 8th, to appear.

Li, Y., Wang, Z., **An, Z.**, Zhong, Y., Chen, S., & Feng, C. (2021). V2X-Sim: A Virtual Collaborative Perception Dataset and Benchmark for Autonomous Driving. Manuscript in submission.

**TECHNOLOGY SKILLS** *Programming Languages:* Python, C/C++, HTML, CSS, JavaScript, Verilog (IEEE), AT&T Assembly  
*Operating Systems:* Linux, Windows, Mac OSX  
*Tools:* pandas, NumPy, scikit-learn, PyTorch, Keras, TensorFlow, Apache Spark, Django, LaTeX