Kanaad Parvate

EDUCATION

University of California Berkeley

M.S. Electrical Engineering Computer Science *2019-2020*
- Advised by Prof. Alexandre Bayen

B.S. Electrical Engineering Computer Science | GPA: 3.70 *2015-2019*
- Receipient of 2018 Arthur M. Hopkin Award for Excellence in Electrical Engineering

INDUSTRY EXPERIENCE

Waymo *Software Engineer | Mountain View, CA* *July 2020 - Present*
- Software Engineer on Behavior Prediction team
- Building and deploying data driven and performant motion planning models

Lyft Level 5 *Autonomy (Perception) Intern | Palo Alto, CA* *Summer 2019*
- Worked on LiDAR pipeline for 3D point-cloud clustering
- Fused deep learning and and conventional geometric techniques to improve onboard clustering
- Developed comprehensive metrics for evaluating clustering accuracy against groundtruth labels

Tesla Autopilot *Machine Learning Intern | Palo Alto, CA* *Spring 2019*
- Worked under Andrej Karpathy developing ML models for prediction of lead vehicle velocity
- Deployed experimental model in firmware code to facilitate testing and evaluation
- Part of 2019 Tesla Autonomy day preperations — worked on validation of intersection vision models

Lyft Level 5 *Software Engineering Intern | Palo Alto, CA* *Summer 2018*
- Part of first intern class at Lyft's self driving initiative working on onboard platform/tooling team
- Worked on realtime visualizations, developing onboard status and diagnostic tools

Quantcast *Software Engineering Intern | San Francisco, CA* *Summer 2017*
- Used AWS services to build system for processing stream of real-time advertising events
- Worked within a large, distributed, backend system handling large volumes of data

ACADEMIC EXPERIENCE

Learning Traffic Lab *Undergraduate Researcher* *2016 - present*
- Applying deep reinforcement learning to multi-agent autonomous vehicle systems
- Analyzing applications to traffic stability, interesection throughput, and emission output
- Lead development of Flow, a framework for facilitating control and deep reinforcement learning in autonomous vehicles by leveraging an open source traffic simulator, SUMO with deep RL libraries
  - "Flow: Architecture and Benchmarking for Reinforcement Learning in Traffic Control", C. Wu, A. Kreidieh, **K. Parvate**, E. Vinitsky, A. Bayen, arXiv preprint arXiv:1710.05465, 2017,
- Explored deep multiagent RL techniques to reduce congestion in bottlenecks on highways
  - "Lagrangian Control through Deep-RL: Applications to Bottleneck Decongestion", E. Vinitsky, **K. Parvate,** A. Kreidieh, C. Wu, Z. Hu, A. Bayen, ITSC, 2018

EE 126 Probability and Stochastic Processes: *Undergraduate Student Instructor* *2018*
- Held weekly discussion sections and office hours for an advanced upper-division class
- Graded homeworks, designed labs for students, ran office hours, wrote test questions

SKILLS

Languages: C++, Python, MATLAB, Java

Mathematics / Data Science: NumPy, SciPy, Pandas, PyTorch, TensorFlow