Nishant Kheterpal

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Education

University of Michigan   Began Fall 2020
- *PhD* in Robotics, advised by Gabor Orosz and Jean-Baptiste Jeannin
- Emphasis on formal verification of vehicle control systems

University of California, Berkeley - GPA: 3.85/4.0   Graduated Fall 2018
- *Bachelors of Science* in Electrical Engineering and Computer Sciences
- Coursework in artificial intelligence, machine learning, vehicle dynamics, optimization, probability, controls, data science, computer architecture, algorithms, discrete math, linear algebra

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Experience

Uber ATG - Research Intern   3/2020 - 8/2020
- Developed ride comfort metrics for autonomous vehicles to improve passenger experience
- Productionized safety metrics using Traffic Conflict Technique with research staff

Ike Robotics - Simulation Software Engineer   1/2019 - 1/2020
- Developed simulator in Unreal Engine to test and validate autonomy software for trucking
- Built out features like simulated intelligent actors and integrated control & dynamics into simulation
- Implemented distributed cloud simulation in Google Cloud Platform using Docker and Kubernetes

Berkeley Deep Drive - Undergraduate Researcher   1/2017 - 12/2018
- Built Flow, an open-source framework enabling deep reinforcement learning for traffic control using vehicle simulator SUMO, RLlib, rllab, and Amazon Web Services
- Designed experiments in Flow to train vehicles and infrastructure to alleviate traffic congestion
- Co-author, "Benchmarks for reinforcement learning in mixed-autonomy traffic", 2018 CoRL
- First author, "Flow: Deep Reinforcement Learning for Control in SUMO", 2018 SUMO User Conference

Foundations of Data Science, UC Berkeley - Undergraduate Student Instructor   8/2016 - 12/2018
- Pedagogy lead supervising a team of 4 instructors developing course materials for 1200+ students
- Course evaluations consistently above average (personal: 4.6/5, average: 4.3/5)

General Motors - Electrification Controls Intern   6/2017 - 8/2017
- Validated power consumption models for electric vehicles using experimental data

Apple - Emerging Technologies Intern   5/2016 - 8/2016
- Developed interactive Matlab tools to analyze and summarize spatial and temporal datasets

University of Michigan Transportation Research Institute - Research Assistant   7/2013 - 8/2015
- Built Matlab tools to automatically characterize heavy truck suspension behavior from test data

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Honors and Awards

NSF Graduate Research Fellowship Honorable Mention   2021
Berkeley Engineering Honors to Date - Top 20% GPA   Fall 2015 - Fall 2018
Outstanding Graduate Student Instructor Award - Top 9% of GSIs   Spring 2018
Member, Eta Kappa Nu, Mu (Berkeley) Chapter - Top 25% of EECS Majors   Fall 2016
College of Engineering Dean's List - Top 10% GPA   Fall 2015, Fall 2016, Spring 2017