

# Nishant Kheterpal

nishantkheterpal@gmail.com  
734-205-8574

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## Education

**University of California, Berkeley** - GPA: 3.93/4.0 Expected Graduation: May 2019

- Major: Electrical Engineering and Computer Sciences; Concentration: Statistics
- Coursework in artificial intelligence, convex optimization, probability theory, controls, data science, computer architecture, algorithms, discrete math, linear algebra

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## Experience

**Berkeley Deep Drive - Undergraduate Researcher** 1/2017 - Present

- Extended open-source microscopic vehicle simulator SUMO to enable deep reinforcement learning for traffic control strategies, leveraging Amazon Web Services compute hardware
- Explored viability of autonomous vehicles and speed limit control for streamlining traffic
- Co-author, "Framework for Control and Deep Reinforcement Learning in Traffic", 2017 IEEE Intelligent Transportation Systems Conference
- 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 - Present

- Primary lab section instructor teaching computational and inferential thinking with real-world data
- Member of teaching staff responsible for developing course and studying pedagogy

**General Motors - Electrification Controls Intern** 6/2017 - 8/2017

- Validated power consumption models for electric vehicles using experimental data
- Developed and troubleshooted Simulink models for electrified powertrain energy consumption

**Apple - Emerging Technologies Intern** 5/2016 - 8/2016

- Developed interactive Matlab tools to analyze and summarize spatial and temporal datasets
- Streamlined a signal simulation pipeline and created GUIs for rapid signal generation
- Extended open source library tools in Matlab for data analysis and simulation purposes
- Summarized work in final presentation, well-received by 20+ cross-functional team members

**Foundations of Data Science, UC Berkeley - Course Assistant** 1/2016 - 5/2016

- Created course materials to help teach resampling, visualization, and other statistics concepts

**University of Michigan Transportation Research Institute - Research Assistant** 7/2013 - 8/2015

- Analyzed sensor data using SQL and plotting tool Igor to evaluate active safety performance
- Built Matlab tools to automatically characterize heavy truck suspension behavior from test data

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## Honors and Activities

**Outstanding Graduate Student Instructor Award** - Top 9% of GSIs 2017/2018

**Member, Eta Kappa Nu, Mu (Berkeley) Chapter** - Top 25% of EECS Majors 12/2016 - Present

**Berkeley Engineering Honors to Date** - Top 20% GPA Fall 2015 - Present

**College of Engineering Dean's List** - Top 10% GPA Fall 2015, Fall 2016, Spring 2017

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## Programming Languages and Tools

- Matlab, Simulink, Python (numpy, scipy, pandas), Java, C, SQL, Autodesk Inventor