

Curriculum Vitae  
**Akhil Rao**

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**Contact:**

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**Citizenship:** USA

**Education:**

Ph.D in Economics University of Colorado at Boulder	2016-2019 (expected)
M.A. in Economics University of Colorado at Boulder	2014-2016
B.S. in Business Administration, <i>cum laude</i> University of California at Riverside	2008-2012

**Research:**

**Research fields:** Environmental and resource economics

**Works in progress:**

Space Traffic Management: Economic Control of Orbital Congestion  
Cost in Space: Debris and Collision Risk in the Orbital Commons (with Giacomo Rondina)

**Conference publications:**

The CENKI Space Economic Simulator: Analytical Verification of an Agent-Based Modeling Engine (with Andrew Gemer, Nicholas Campbell, John Marino, Trevor Bennett, Charles Cain, and Tobias Niederwieser), in *2018 IEEE Aerospace Conference Proceedings*

The CENKI Space Economic Simulator: Demonstrating Agent-Based Modeling on Satellite Market Data (with Andrew Gemer, Nicholas Campbell, John Marino, Trevor Bennett, Charles Cain, and Tobias Niederwieser), in *2018 IEEE Aerospace Conference Proceedings*

**Conference presentations:**

2018 IEEE Aerospace Conference  
Heartland Environmental and Resource Economics Workshop at Illinois 2017  
CU Environmental and Resource Economics Workshop 2017

**Seminar presentations:**

CU Environmental economics brown bag x5  
CU Macroeconomics brown bag x2  
CU Algorithmic economics group x1

**Professional society memberships:**

Association of Environmental and Resource Economists

**Programming languages:**

R, Stata, Matlab, Python, GAMS, C++

## **Professional experience:**

### **Graduate Part-Time Instructor**

2017-present

*University of Colorado Boulder*

- Teaching Math Tools for Economists 1
- Planning lessons and assignments, grading assignments and exams

### **Reader**

*University of Colorado Boulder*

Spring 2016, 2017

- Graded homework for upper division economics class, "Market Design".

### **Teaching Assistant**

2014-2016

*University of Colorado Boulder*

- Taught 4 recitation sections per semester for Principles of Microeconomics or Principles of Macroeconomics
- Planned lessons and assignments, led discussion sections, graded papers and exams

### **Data Analyst**

2013-2015

*Red9 Corporation*

- Wrote a patent application for the Red9 user modeling and feedback system
- Analyzed the effects of surfboard construction methods on surfing performance using stress analysis and econometric models
- Worked on commercial model deployment using Python and Node.js
- Developed a statistical framework to characterize ocean swells from surfboard-mounted motion sensors
- Developed and validated statistical models in R to predict user actions from motion sensor data and provide users with product and action recommendations, and to characterize and correct motion sensor recording errors
- Developed analytical models of surfing, snowboarding, and motorcycling actions

### **Coro Fellow**

2013-2014

*Fellows Program in Public Affairs, Coro Southern California*

- Consulted for various organizations in Southern California. Specific projects include
  - A cost-effectiveness study of the UCLA Breathmobile, a mobile asthma clinic funded by the Port of Long Beach targeting under-served youth in Long Beach
  - A strategic framework for ECOM Foundation with recommendations on its mission, its governance structure, and its \$500 million portfolio of investments in education

### **Reader**

*University of California Riverside*

2012-2013

- Graded homework and exams for upper division political science and economics classes, "The politics of India and Pakistan", "Health economics", and "Labor economics"

### **Assistant Resident Director**

2011-2012

*UC Riverside Housing Services*

- Supervised a staff of 10 Program Coordinators each quarter
- Led weekly meetings, provided mentorship, and developed organizational tools
- Coordinated marketing, logistical, executive, and assessment efforts for more than 50 projects over five 10-week cycles for 1200-3500 students

- Program Coordinator/Resident Adviser** 2009-2011  
*UC Riverside Housing Services*
- Responsible for 2 residence hall communities of 60-70 first-year students
  - Implemented programming to improve student academic and developmental outcomes
  - Enforced residence hall conduct policy

**Honors and awards:**

- 2018 Summer Graduate School Fellowship** 2018
- Award given to one PhD candidate per department to assist in dissertation completion

- Reuben A. Zubrow Fellowship in Economics** 2017
- Graduate award for excellence in teaching economics

- Coro Fellowship** 2013-2014  
*Fellows Program in Public Affairs, Coro Southern California*
- Full-time 9 month fellowship studying public affairs through site visits, interviews, and consulting projects with labor unions, non-profits, government agencies, electoral campaigns, private businesses, and media agencies

- Honors Program** 2009-2012  
*University of California Riverside*
- Conducted a microeconomic analysis of the effects of UC Riverside residence hall programming on student academic achievement from 2007-2012