

# AAKRITI KUMAR

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## EDUCATION

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**PhD in Cognitive Science**  
University of California, Irvine  
Advisor: Mark Steyvers

2018 - 2023 (*expected*)

**MS in Statistics**  
University of California, Irvine

2018-2021 (*expected*)

**BTech in Metallurgical and Materials Engineering**  
Minor: Operations Research  
Indian Institute of Technology, Madras

2011 - 2015

## RESEARCH

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**Human Decisions with Machine Assistance**      Advisor: Mark Steyvers, Padhraic Smyth  
*Graduate Student Researcher, University of California, Irvine*      *May'19-Present*

- Investigating strategies to counter cognitive biases such as algorithm aversion and automation bias in human-machine teams
- Designing a web-based experiment using Google's Natural Questions database
- Developing Bayesian cognitive models of trust in human-machine teams

**Learning & Retention in Large-scale Cognitive Training Datasets**      Advisor: Mark Steyvers  
*Graduate Student, University of California, Irvine*      *Jan'19-Present*

- Leveraging large-scale data from Lumosity games to analyze the learning trajectories across individuals and cognitive tasks over time
- Jointly modelling the effects of practice, long and short delays on player performance

**Individual Differences in Cognitive Control**      Advisor: Jeffrey N. Rouder  
*Graduate Student, University of California, Irvine*      *Sept'18-Dec'19*

- Investigating whether inhibition or cognitive control is a domain-general, unified process that mediates several different actions, tasks, or, alternatively, there is no such unified process
- Developed Bayesian hierarchical models that account for variation across trials, variation across individuals, and covariation across individuals and tasks
- **Preprint:** Rouder, J., Kumar, A., & Haaf, J. M. Why Most Studies of Individual Differences With Inhibition Tasks Are Bound To Fail

## TEACHING EXPERIENCE

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- Teaching Assistant: Probability and Statistics in Psychology I, II, III (Fall 2019, Winter 2020, Spring 2020), UC Irvine
- Teaching Assistant: Introduction to Psychology (Fall 2018), UC Irvine

## RELEVANT SKILLS AND COURSEWORK

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- Python, PyTorch, R, JavaScript, HTML, CSS, Git

- Coursework: Bayesian Statistical Analysis, Bayesian Cognitive Modelling, Social Data Science, Statistical Computing Methods, Intermediate Probability and Statistical Theory

## PROFESSIONAL EXPERIENCE

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### **Research Associate, Indian Institute of Technology, Madras**

Chennai, India

*Advisors: Dr. R. R. Marathe, Dr. N. Sudarsanam*

*Mar'17 - May'18*

- Conducted research in supply chain management and prospect theory
- Worked on data science projects in supply chain management

### **Associate Program Manager, Ola cabs**

Bangalore, India

*Corporate Strategy & Process Excellence*

*Jun'15 - Aug'16*

- Ola Airport Pickup Process (Bangalore, Mumbai) : Designed a process for smooth passenger and driver movement as part of a 4 member team. Built computer simulations to elucidate requirements of drivers based on flight timings and booking history. Worked with the product team to design driver side demand based alert features on the app
- City Revamp Operations (Bangalore, Mumbai): Identified gaps in driver onboarding process. Reduced turnaround time of process by 30%
- Ola Store - City Manager(Chennai): Led a team of 40 to launch operations of hyperlocal delivery services arm

### **Vocational Trainee, Tata Steel Ltd.**

Bangalore, India

*Primary Steel Making Unit*

*May'13 - Jul'13*

- Analysed the effect of addition of sintered dolomite on slag chemistry and its effect on ladle life

### **Teacher & Mentor, PACE Pvt. Ltd.**

Mumbai, India

*Training Center*

*May'12 - Jul'12*

- Taught Mathematics and Physics to 50 high school students and mentored 10 girl students preparing for careers in engineering

## AWARDS

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- Graduate Dean's Recruitment Fellowship 2018, UCI
- Recruitment Fellowship Award, 2018, Department of Cognitive Science, UCI.
- Placed in the top 0.5% in IIT-JEE, 2011 with an All India Rank of 2650
- Ranked 62 (year 2008) and 132 (year 2007) in the All India Maths Talent Search Examination conducted by Indian Institute for Studies in Mathematics

## MEMBERSHIPS AND SERVICE

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- Cognitive Science Society Student Member
- Psychonomic Society Student Member
- Contributed to the Attentional control hackathon: 'Does an attentional control construct exist and, if so, how can we reliably measure it?' held at Psychonomics'18  
Manuscript: Advancing the Understanding of Attentional Control