Aparajithan Venkateswaran

apara.vnkat@gmail.com www.aparavenkat.com github.com/AparaV (720) 520-2811

Education

University of Washington **Expected 2025**
Ph.D. in Statistics

University of Colorado Boulder **May 2020**
B.S. in Computer Science, *summa cum laude* (with Honors) GPA: 4.000
B.S. in Applied Mathematics, *summa cum laude* (with Honors)
Senior Thesis (advised by Prof. Daniel Larremore):
"Understanding SpringRank through Random Utility Models, Identifiability and Online Updates"

Experience

Software Engineering Intern, Microsoft **May 2020 – Aug 2020**
- Intern in the Mixed Reality Team.
- Designing and implementing indoor navigation and wayfinding from HoloLens surface reconstruction.
- Working with Havok Physics Engine and Azure Spatial Anchors SDK.

Research Assistant, University of Colorado Boulder **Jan 2018 – Present**
- NSF funded REU working with Prof. Daniel Larremore on identifying structure in complex networks.
- Developing mathematical models to monitor population densities in response to COVID-19 with Prof. Ryan Layer.
- Developed mathematical tools to study ranking of nodes in complex networks.
- Designed machine learning and mathematical models to segment and parse academic resumes.

Teaching Assistant, University of Colorado Boulder **Jan 2018 – May 2020**
- Teaching assistant for Chaotic Dynamics (CSCI 4446) in Spring 2020.
- Course assistant for Discrete Structures (CSCI 2824) in Spring 2018.
- Holding office hours; grading assignments; and designing new questions for assignments and exams.

Software Engineering Intern, Microsoft **May 2019 – Aug 2019**
- Intern in the Edge Experimentation Team.
- Designed and implemented an internal tool from scratch to automate data collection from experiments.
- Designed and implemented automatic reporting and strategies for interoperability between Chrome and Edge.

Research Assistant, University of Colorado Boulder **Sep 2017 – Dec 2017**
- Worked under Dr. Hanspeter Schaub on optical navigation and feature tracking in astronomical objects.
- Developed a deep neural network to detect craters and designed an algorithm to track craters across time.

Awards

Outstanding Undergraduate for Academic Achievement **May 2020**
For graduating with the highest GPA (4.000) from the College of Engineering and Applied Sciences at CU Boulder.

Chancellor's Recognition Award **May 2020**
For graduating with the highest GPA (4.000) from University of Colorado, Boulder.

Active Learning Award **May 2020**
For performing research, volunteering, and industry internships in the College of Engineering at CU Boulder.

Computer Science Discovery and Service Learning Award **May 2020**
For performing research (Discovery) and volunteering (Service) in the Computer Science department at CU Boulder.

INFORMS Award, Outstanding Winner – Mathematical Contest in Modeling (COMAP) **Apr 2019**
Winner of INFORMS Award, given to 6 of 36 winning teams. One of 36 winning teams out of 25,000 international teams. Modeled epicenters of the opioid crisis in five states in USA and suggested strategies to combat the problem.

Meritorious Winner (top 10%) – Mathematical Contest in Modeling (COMAP) **Apr 2018**
Modeled the cost of an individual's privacy, in a free market, by considering the risks and benefits associated with sharing private information along with highly correlated nature of human data.

Publications

1. **A. Venkateswaran**, B. Palmer, J. Kailey-Steiner, "The Value of Identity: Measuring the Cost of Privacy", *Colorado Journal of Applied Mathematics* pp. 1-22, (2018)

Skills

Languages	Proficient in C/C++, Python; Experienced in MATLAB/GNU Octave, JavaScript
Tools and Frameworks	TensorFlow, NumPy, scikit-learn, SciPy, matplotlib
Misc.	Mathematical modeling, Probabilistic generative models, Parameter optimization

Volunteering

GitHub Campus Expert
Volunteering with GitHub to develop tech community around University of Colorado, Boulder **Oct 2017 – May 2020**

Director of Logistics, HackCU
Head of logistics at student group that organizes hackathons, workshops and career fairs **Sep 2016 – May 2020**

Department Action Team, University of Colorado Boulder
Addressing issues in the undergrad computer science curriculum with faculty and students **Sep 2019 – Dec 2019**