

# Kumar Thurimella

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## EDUCATION

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- University of Cambridge** Cambridge, UK  
Ph.D. in Biotechnology | Statistics, Advisors: Roisin Owens (CEB), Sergio Bacallado (Stats Lab) Oct 2020–Current
- University of Colorado, School of Medicine** Denver, CO  
M.D. Candidate, Advisor: Cathy Lozupone Aug 2018–Current
- University of Cambridge** Cambridge, UK  
M.Phil. in Computational Biology (Biological Sciences), Advisor: Gosia Trynka Oct 2017–Aug 2018  
– Thesis: “Evaluating the Efficacy of Epigenetic Imputation in CD4+ Regulatory T Cells”
- University of Colorado, Boulder** Boulder, CO  
B.S. in Applied Mathematics, *Magna Cum Laude*, Advisor: Rob Knight Aug 2009–Aug 2013  
– Thesis: “Using Rule Induction to Elucidate Co-Occurrence Patterns in Microbial Data”

## EXPERIENCE

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- Uber Technologies** San Francisco, CA  
Software Engineer II Mar 2015–Aug 2017  
– Using a heuristic recursive backtracking algorithm, built an auto-scheduler to schedule all incoming candidates for Uber, that sits atop our own custom Applicant Tracking System  
– Python, Flask, Tornado, React.js
- ThoughtWorks** San Francisco, CA  
Junior Software Developer Apr 2014–Mar 2015  
– Developed software as a consultant, building and maintaining web applications for clients  
– Java, Spring

## PUBLICATIONS

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- [1] M. Shaffer, K. Thurimella, and C. A. Lozupone, “SCNIC: Sparse Correlation Network Investigation for Compositional Data”, Cold Spring Harbor Laboratory, Nov. 2020. eprint: <https://www.biorxiv.org/content/early/2020/11/16/2020.11.13.380733.full.pdf>, *Joint first authors with equal contributions*.
- [2] M. Shaffer, K. Thurimella, K. Quinn, K. Doenges, X. Zhang, S. Bokatzian, N. Reisdorph, and C. A. Lozupone, “Amon: Annotation of metabolite origins via networks to integrate microbiome and metabolome data”, *BMC bioinformatics*, vol. 20, no. 1, pp. 1–11, 2019.

## RESEARCH EXPERIENCE

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### **Cathy Lozupone Lab - University of Colorado School of Medicine**

Denver, CO

Research Track Medical Student

Sep 2018–Oct 2020

- Developed software to integrate metabolomics data with microbiome data to predict the origin of metabolites (from the host of microbes)

### **Gosia Trynka Lab - Wellcome Sanger Institute**

Cambridge, UK

MPhil Research Student

Sep 2017–Aug 2018

- Developed software to examine and benchmark epigenetic imputation for rare immune cell types (Tregs)

### **Rob Knight Lab - University of Colorado Boulder**

Boulder, CO

Undergraduate Research Student

Aug 2012–Aug 2013

- Developed software to examine and ultimately tease out co-occurrence patterns within microbial data. Focused on a data mining technique, known as association rule mining, to mine higher dimension co-occurrences

## PRESENTATIONS

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- Kumar Thurimella, Michael Shaffer PhD, Cathy Lozupone PhD, Employing Metabolomics and Microbiome Data to Build Algorithm for Interrogating Host-Microbe Interactions (Oral), National MD/PhD Conference 2020
- Kumar Thurimella, Michael Shaffer PhD, Cathy Lozupone PhD, Employing Metabolomics and Microbiome Data to Build Algorithm for Interrogating Host-Microbe Interactions (Oral), Western Medical Research Conference, Carmel, CA 2020
- Kumar Thurimella, Lara Bossini-Castillo PhD, Gosia Trynka PhD, Using ChromImpute to Recover Lost Epigenetic Signal in Rare Immune Cells (Oral), Sanger Institute Research Forum, Hinxton, UK 2018
- Kumar Thurimella, Fang Liu PhD, Applying a Recursive Backtracking Heuristic to Solve Scheduling Problems (Oral) Uber Technology Talk, San Francisco, CA 2017
- K. Kumar Thurimella, Jose Clemente PhD, Rob Knight PhD, Rule Induction: Classification of the Microbiome (Oral), Norlin Scholars Conference, Boulder, CO 2013

## SCHOLARSHIPS AND AWARDS

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- Gates Cambridge Scholarship (£48,313/year) 2020–2024
  - [Combining Maths and Medicine](#)
  - [CU Medical Student Wins \\$250,000 Scholarship](#)
  - [Kumar Thurimella Awarded Gates-Cambridge Scholarship | Applied Mathematics](#)
  - [Gates Cambridge Class of 2020](#)
- Dr. Henry Christian Award, American Federation for Medical Research - Most Outstanding Abstract 2019
- Cambridge University Entrepreneurs Competition Finalist 2018
- Wellcome Trust Departmental Award Full Scholarship, University of Cambridge (£39,029/year) 2017
- Norlin Scholars Scholarship (\$4,000/year) 2011–2013
- Engineering Merit Scholarship (\$2,000/year) 2009–2013
- National Institute of Standards and Technology (NIST) Prep Scholarship (Full Tuition + Stipend) 2010–2011