ANUNAY KULSHRESTHA

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EDUCATION

Stanford University 2017–2018 **M.A. in Public Policy (Legal & Regulatory Intervention)**
Thesis: Bittersweet Fruits of Incumbency – Evidence from India
Thesis Advisor: Prof. Saumitra Jha
Relevant Courses: Political Development Economics, Applied Econometrics Economic Policy Analysis, Economics of Law

2013–2017 **B.S. in Computer Science (Systems)**
Advisor: Prof. Dan Boneh
Relevant Courses: Cryptography, Computer Security, Network Analysis, Operating Systems, Compilers, Complexity Theory, Machine Learning
Senior Project: Cryptographically Secure Multiparty Computation and Distributed Auctions using Homomorphic Encryption
Project Advisor: Prof. Tim Roughgarden

2013–2017 **B.S. in Mathematics**
Advisor: Prof. Kannan Soundararajan
Relevant Courses: Real Analysis, Abstract Algebra, Probability Theory, Number Theory

RESEARCH EXPERIENCE

Research Associate, Prof. Antoinette Schoar (Golub Center for Finance & Policy, MIT Sloan)
Aug 2018– ▶ *Investigating manipulation in cryptocurrency markets by studying trading behavior of miners and hoarders by analyzing transactions on major exchanges.*

Research Assistant, Prof. David Studdert (Center for Health Policy, Stanford)
Apr–Jun, 2018 ▶ *Estimated the impact of political partisanship on firearm acquisition during presidential elections using novel data on firearm sale records and precinct-level voting results in California.*
Jul–Dec, 2017 ▶ *Examined the effect of firearm acquisition on suicide, homicide & arrest rates in California using a longitudinal cohort by combining DROS weapon registry, voter registry, mortality data and arrest records.*

Research Assistant, Prof. Alex Aiken (Computer Science, Stanford)
Jul–Sep, 2015 ▶ *Studied the Legion parallel programming system and ported LULESH (Livermore Unstructured Lagrangian Explicit Shock Hydrodynamics), a mesh-based framework for simulating fluid dynamics, to Legion.*

Research Assistant, Prof. Dan Boneh (Computer Science, Stanford)
Jan–Apr, 2014 ▶ *Designed and developed one of the first efficient implementations of a private information retrieval protocol in an embedded system using the additively homomorphic Paillier cryptosystem.*

PUBLICATIONS

K. Anunay, R. Akshay, D. Matthew, S. Ashwin. Cryptographically Secure Multiparty Computation and Distributed Auctions using Homomorphic Encryption, *Cryptography*. 2017; 1(3):25. [Paper]

K. Anunay, S. Arpan, L. Devin. Politically Predictive Potential of Social Networks: Twitter and the Indian General Election 2014, In *Proc. of the Fourth Multidisciplinary International Social Networks Conference*. ACM, New York, NY, USA. [Paper]

▶ *Won Best Paper Award at the conference. Featured in the Huffington Post & the Hindustan Times.*

K. Anunay. On Hamming Distance Between Base-n Representations of Whole Numbers, *Canadian Young Scientist Journal*, 14–7, 2–2012. issn: 1913-1925. [Paper]

▶ *Won Best Young Scientist Paper Award by the National Research Council (NRC) Press, Canada.*

WORKSHOP PRESENTATIONS

K. Anunay. Bittersweet Fruits of Incumbency: Evidence from India, *Fourteenth International Conference on Interdisciplinary Social Sciences*. June 2019; (Accepted).

AWARDS & GRANTS

2017 Best Paper Award: *Fourth Multidisciplinary International Social Networks Conference, 17-19 July 2017*

2017 Conference Grant: *Awarded by Stanford Undergraduate Advising & Research (UAR)*

2016 Jane Stanford Fellowship for Public Service: *Awarded by the Haas Center for Public Service, Stanford*

2013 Khemka Fellowship: *College scholarship offered to six Indian students studying in the United States*

2013 UC Regents' and Chancellor's Scholarship: *Awarded by UC Berkeley to the top undergraduate applicants*

2012 Best Young Scientist Paper Award: *Awarded by the National Research Council (NRC) Press, Canada*

2012 Regional Mathematical Olympiad Awardee: *Amongst six high school seniors from New Delhi*

2012 National Earth Science Olympiad Awardee: *Amongst twenty-two high school students from India*

2012 National Linguistics Olympiad Awardee: *Amongst twenty high school students from India*

TEACHING EXPERIENCE

Spring 2017-18 Teaching Assistant, Computer and Network Security (CS 155), Prof. Dan Boneh

Winter 2017-18 Teaching Assistant, Introduction to Cryptography (CS 255), Prof. Dan Boneh

Fall 2017-18 Teaching Assistant, Analysis of Networks (CS 224W), Prof. Jure Leskovec
- *Including advising of research projects at the intersection of computational, economic & political networks.*

Spring 2016-17 Teaching Assistant (Head), Computer and Network Security (CS 155), Prof. Dan Boneh
- *Including the management of a team of 8 TAs and the coordination of a class of over 250 students & industry professionals through the Stanford Center for Professional Development (SCPD).*

PROFESSIONAL EXPERIENCE

Apr–Jul, 2016 Public Service Fellow, Office of Dr. Shashi Tharoor, Member of Parliament (Thiruvananthapuram, Kerala)
- *Designed and developed a smartphone-based civic grievance redressal mechanism for the electorate. Built analytical tools to facilitate evidence-based public policymaking for the MP's office.*

Sep–Dec, 2015 Engineering Intern, Keybase Inc. (San Francisco)
- *Developed a secure distributed filesystem for sharing files using public key encryption and implemented secret sharing mechanisms to enable seamless file sharing.*

Jun–Sep, 2014 Research Intern, Search & Discoverability R&D, Bloomberg LP. (New York)
- *Examined re-ranking models for search results and extracted implicit feedback from user metrics. Built infrastructure for interleaving re-ranking models in the HL (Search) function on the Bloomberg Terminal employing theoretical guarantees from recent work in web retrieval. The project was later open sourced by Bloomberg as part of the Learning-to-Rank (LTR) plug-in for Apache Solr.*

SKILLS

Programming	C, C++, Java, Python, R, Go, Haskell
Software	Stata, MATLAB, Mathematica
Languages	English (native), Hindi (native), French (beginner)

REFERENCES

Prof. Dan Boneh
Professor of Computer Science & Electrical Engineering
Stanford University
dabo@cs.stanford.edu

Prof. Jure Leskovec
Associate Professor of Computer Science
Stanford University
jure@cs.stanford.edu

Prof. Tim Roughgarden
Professor of Computer Science
Stanford University
tim@cs.stanford.edu