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 [Published in *Cryptography*. 2017; 1(3):25.]
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

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

Apr–Jun, 2018   Research Assistant, Prof. David Studdert (Center for Health Policy, Stanford)
▶ *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.*

Jul–Sep, 2015   Research Assistant, Prof. Alex Aiken (Computer Science, Stanford)
▶ *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.*

Jan–Apr, 2014   Research Assistant, Prof. Dan Boneh (Computer Science, Stanford)
▶ *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.*

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) ▶ *Developed a smartphone-based civic grievance redressal mechanism for the electorate and designed data visualization tools to facillitate evidence-based public policymaking for the MP's office.*
Sep–Dec, 2015	Engineering Intern, Keybase Inc. (San Francisco) ▶ *Designed a cryptographically secure filesystem for sharing files using public key encryption and implemented secret sharing mechanisms to generate shared key pairs.*
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. Also built infrastructure for interleaving re-ranking models in the HL (Search) function on the Bloomberg Terminal establishing 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
Software	Stata, MATLAB, Mathematica
Languages	English (native), Hindi (native), French (beginner)

REFERENCES

Prof. Dan Boneh	Prof. Jure Leskovec	Prof. Tim Roughgarden
Professor of Computer Science & Electrical Engineering	Associate Professor of Computer Science	Professor of Computer Science
Stanford University	Stanford University	Stanford University
dabo@cs.stanford.edu	jure@cs.stanford.edu	tim@cs.stanford.edu