

Rushi Shah

☎ 202-755-7424
✉ 2016rshah@gmail.com
Site: rshah.org/

Education

- May 2020 **University of Texas - Austin, Turing Scholar Honors Program**
B.S. Computer Science & B.S. Mathematics; **GPA: 3.83**
- May 2016 **Thomas Jefferson High School for Science and Technology (TJHSST)**

Work Experience

- Summer **UT Program Analysis Research Group, Research Assistant, Austin**
2019
 - Presented paper called “*Synthesizing Database Programs for Schema Refactoring*” (third author) at top-tier Programming Languages Design & Implementation (PLDI) conference
 - Implemented prototype tool in Java programming language for paper called “*Data Migration using Datalog Program Synthesis*” (second author) in top-tier Very Large DataBases (VLDB) conference
- Spring **CS 389L Automated Logical Reasoning (graduate level class), Teaching Assistant**
2019
 - Served as Teaching Assistant for 60 Master’s and Ph.D. students; graded weekly proof-based homeworks; held well-attended weekly office hours; helped grade midterm and final exam
- Summer **Amazon, Software Engineering Intern, Tokyo, Japan**
2018
 - Elegantly reduced the task of tracking real-time, location-based purchase trends in Amazon order data to leverage an edge-detection algorithm (a traditional machine vision technique)
 - Implemented a service based on above approach using the Java programming language, the Python programming language, the OpenCV library, and Amazon Web Services tools like S3 and EC2
- Summer **Originate, Software Engineering Intern, New York City**
2017
 - Worked at this software consulting firm in Manhattan on a data center workload analysis contract
 - Generalized and patched distributed computing scripts by coding in the Scala programming language with the Spark framework over Cassandra databases
- Summer **MITRE Corporation, Research Assistant, Washington DC**
2014, 2015
 - Worked for the Federal Aviation Administration (FAA) at this federally-funded R&D center to improve the Closed Runway Operations Prevention Device (CROPD) which prevents plane crashes
 - Adapted computational linguistics algorithms to call-sign identification task in over 25,000 transmissions; edited strict language model based on air traffic controller’s emerging speech patterns

Publications

- Sept. 2020 **Data Migration using Datalog Program Synthesis**, Yuepeng Wang, [Rushi Shah](#), Abby Criswell, Rong Pan, Isil Dillig, *Proceedings on Very Large DataBases (VLDB ’20)*
- March 2020 **Texas Felon Disenfranchisement Enables Institutional Racism**, [Rushi Shah](#), *The Daily Texan*
- June 2019 **Synthesizing Database Programs for Schema Refactoring**, Yuepeng Wang, James Dong, [Rushi Shah](#), Isil Dillig, *Programming Languages Design & Implementation (PLDI ’19)*

Leadership

- Jan. 2017 **TX Votes (non-partisan civic engagement), STEM Committee Chair**
- Present
 - Threw voter registration drive in Computer Science building; one student registered for every three minutes spent tabling
 - Co-hosted four *Tech & Politics Speaker Series* events with Austin Tech Alliance; invited speakers include Professor Hovav Shacham (Computer Security expert who spoke on integrity of voting systems) and Mark Strama (head of Google Fiber West who spoke on tech lobbying efforts)
 - Trained as Volunteer Deputy Registrar (VDR) and personally registered over 250 voters

- May 2019 **Physics/Math/Astronomy Board for Student Advocacy**, *Math Initiative Lead*
 Present • Strengthened math major community by increasing communication and relationships between the following niche organizations: the UT (Pure) Math Club, the Society for Industrial & Applied Mathematicians, the Actuarial Science Club, and the Science Teachers of Tomorrow
- Sept. 2017 **Information Systems & Security Society (ISSS)**, *Communications Officer*
 May 2018 • Coordinated weekly messaging for UT's largest Computer Science organization; informed >300 members about Computer Security events like speaker panels and Capture the Flag competitions

Speaking Engagements

- Dec. 2018 **Moderator**, *Tech & Politics Speaker Series*, Prof. Hovav Shacham on Election Security
 • Moderated public conversation with Prof. Shacham on his hacking of airport metal detectors, car computers, & California's election systems, along with the policy implications of his research
- Nov. 2018 **Speaker**, *Math Directed Reading Symposium*, "Gerrymandering Considered Harmful"
 • Presented math research survey relating to numeric methods for computing the unfairness of a given election district, along with relevant policy considerations at local, state, and federal level
- Apr. 2018 **Speaker**, *Turing Lightning Talks*, "Voting! For fun & profit."
 • Presented to Turing Scholar audience about how STEM students at UT vote at rates about 10% lower than average UT students and empirically motivated why they should work to change that
- February 2018, 2019 **Moderator**, *Great Conversations Gala*, Annette Strauss Institute For Civic Life
 • Designated to lead discussion on the technology table at annual charity gala for Annette Strauss Institute For Civic Life; guided conversations about evolving role of technology in civic engagement

Extracurricular Activities

- Sept. 2018 **UT Saaya Competitive Bollywood Fusion Dance Team**, 17-26 hrs/wk
 May 2019 • Danced in South Indian, Bollywood, and Bhangra segments of nationally competitive performance
- Sept. 2017 **Longhorn Salsa Dance Club**, 1-3 hrs/wk
 Present • Familiar with Salsa, Bachata, Casino, and Zouk dance styles
- Sept. 2017 **UT Rock Climbing Competitive Team**, 10-11 hrs/wk
 May 2018 • Southwest Regional level competitor; proficient in outdoor bouldering and outdoor sport climbing

Awards & Honors

- 2019 **Undergraduate Research Fellow**, *UT Office Undergraduate Research*
 2019 **VDR 100 Club Award**, *Travis County Tax Office*, for registering 168 voters in one cycle
 2019 **Eva Stevenson Woods Scholarship**, *UT Unrestricted Endowed Presidential Scholarship*
 2016 **Gregg & Mariko Zeitlin Scholarship**, *UT Unrestricted Endowed Presidential Scholarship*