

Rushi Shah

Education

- May 2020 **University of Texas - Austin**, *Turing Scholar Honors Program*.
B.S. Computer Science & B.S. Mathematics. **GPA: 3.8**
- May 2016 **Thomas Jefferson High School for Science and Technology (TJHSST)**.

Work Experience

- 2019 **UT Program Analysis Research Group (UToPiA)**, *Research Assistant*, Austin.
- Created and submitted video abstract for “*Synthesizing Database Programs for Schema Refactoring*” (third author) to Programming Languages Design and Implementation conference
 - Completed implementation and submitted follow-up paper called “*Data Migration using Datalog Program Synthesis*” (second author) to a top-tier 2020 conference
 - Research interest in program synthesis for database-driven web applications; implementations completed in Java programming language with Z3 SMT solver and Souffle Datalog engine
- 2018 **Amazon**, *Software Engineering Intern*, Tokyo, Japan.
- Elegantly reduced the task of tracking real-time, location-based purchase trends in order data to the traditional machine vision problem of edge-detection
 - Implemented said approach using the Java programming language, the Python programming language, the OpenCV library, and Amazon Web Services tools like S3 and EC2
- 2017 **Originate**, *Software Engineering Intern*, New York City.
- Generalized and patched distributed computing scripts for data center workload analysis (primarily coded in the Scala programming language with the Spark framework over Cassandra databases)
 - Implemented trading strategy simulation for crypto-currencies in the Haskell programming language
- 2014-2015 **MITRE Corporation**, *Research Assistant*, Washington DC.
- Adapted computational linguistics algorithms to call-sign identification task in over 25,000 air traffic controller transmissions using the Python programming language
 - Edited strict language model used for Closed Runway Operations Prevention Device (CROPD) to address air traffic controllers’ emerging speech patterns

Publications

- 2020 **Data Migration using Datalog Program Synthesis**, Yuepeng Wang, [Rushi Shah](#), Abby Criswell, Rong Pan, Isil Dillig, *In Submission*.
- 2019 **Synthesizing Database Programs for Schema Refactoring**, Yuepeng Wang, James Dong, [Rushi Shah](#), Isil Dillig, *Programming Languages Design & Implementation 2019*.

Other Technical Experience

- 2019 **Teaching Assistant**, CS 389L Automated Logical Reasoning (Graduate level class).
- 2019 **Undergraduate Research Fellow (URF)**, UT Office Undergraduate Research.
- 2018 **Speaker**, Math Directed Reading Program, “Gerrymandering Considered Harmful”.
- 2018 **Moderator**, Tech & Politics Speaker Series, Prof. Hovav Shacham on Election Security.
- 2017-2018 **Communications Officer**, Information Systems & Security Society (ISSS).

Service

- 2017-2019 **TX Votes (non-partisan civic engagement)**, *STEM Committee Chair*, 10-12 hrs/wk.
- Threw voter registration drive in Computer Science building; one student registered for every three minutes spent tabling
 - Co-hosted *Tech & Politics Speaker Series* 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 200 voters
- 2017-2018 **Seva Charities**, 1-3 hrs/wk.
- Active participant in local park cleanup, food bank volunteering, & annual charity gala
 - Fundraising efforts go towards mid-day meals at schools for low/no-income students in India
 - Went viral on Snapchat for juggling potatoes at Seva Week fundraiser
- 2017-2019 **Big/Little Endian Turing Mentoring**, <1 hr/wk.
- Formally (Big/Little Endian program) and informally mentor underclassmen/prospective Turing Scholars with guidance on getting involved in research, recruiting, and good/bad campus activities

Activities

- 2018-2019 **UT Saaya Competitive Bollywood Fusion Dance Team**, 17-26 hrs/wk.
Danced in South Indian, Bollywood, & Bhangra segments of nationally competitive performance
- 2017-2019 **Longhorn Salsa Dance Club**, 1-3 hrs/wk.
Fluent social dancer in Salsa & Bachata dance styles; proficient in Casino & Zouk dance styles
- 2017-2018 **UT Rock Climbing Competitive Team**, 10-11 hrs/wk.
Competed at regionals in lead-climbing; proficient in outdoor bouldering and lead-climbing
- 2016-2017 **UT Rock Climbing Club**, 2-3 hrs/wk.

Awards & Honors

- 2019 **Travis County VDR 100 Club Distinction**, *for registering 168 voters in one cycle*.
- 2019-2020 **Eva Stevenson Woods Scholarship**.
- 2016-2017 **Gregg & Mariko Zeitlin Scholarship**.

Selected Coursework

Computer Science.

CS 439(H): Operating Systems (Honors); *CS 389 L*: Automated Logical Reasoning (Graduate); *CS 380 S*: Computer Security (Graduate); *CS 395 T*: Cybersecurity Law & Policy (Graduate)

Mathematics.

M 365 C: Real Analysis I; *M 373 K*: Abstract Algebra I; *M 367 K & L*: Topology I & Topology II

Personal Interests

Cooking, best at Gujarati (Indian) cuisine from scratch; enjoy branching out for variety.

Reading, prefer memoirs, political non-fiction, or literary fiction; have read at least a book a month since January 2017: rshah.org/blog/posts/12-books-12-months-2019.html.

Basketball, Sand Volleyball, & Biking, play pick-up basketball and sand volleyball games on campus; bike to get places.