Rushi Shah

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Education

May 2020	**University of Texas - Austin**, *Turing Scholar Honors Program*
	B.S. Computer Science & B.S. Mathematics; **GPA: 3.83**

Work Experience

Summer 2019 — **UT Program Analysis Research Group**, *Research Assistant*, Austin
- Presented paper called *"Synthesizing Database Programs for Schema Refactoring"* (third author) at top-tier Programming Languages Design and Implementation 2019 conference
- Implemented research prototype tool in Java programming language for forthcoming top-tier conference submission called *"Data Migration using Datalog Program Synthesis"* (second author)

Spring 2019 — **CS 389L Automated Logical Reasoning (graduate level class)**, *Teaching Assistant*
- Responsible for 60 Master's and Ph.D. students; graded homework/exam proofs & held office hours

Summer 2018 — **Amazon**, *Software Engineering Intern*, Tokyo, Japan
- 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 2014, 2015 — **MITRE Corporation**, *Research Assistant*, Washington DC
- 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

Publications

Exp. 2020	**Data Migration using Datalog Program Synthesis**, Yuepeng Wang, <u>Rushi Shah</u>, Abby Criswell, Rong Pan, Isil Dillig, *In Submission*
June 2019	**Synthesizing Database Programs for Schema Refactoring**, Yuepeng Wang, James Dong, <u>Rushi Shah</u>, Isil Dillig, *Programming Languages Design & Implementation*

Leadership

Jan. 2017 – Present — **TX Votes (non-partisan civic engagement)**, *STEM Committee Chair*
- Threw first voter registration drive ever held in Computer Science building; 1 student registered every 3 minutes
- Co-hosted four *Tech & Politics Speaker Series* events with Austin Tech Alliance; invited speakers include Professor Hovav Shacham (Computer Security expert) and Mark Strama (head of Google Fiber West)
- Trained as Volunteer Deputy Registrar (VDR) and personally registered over 250 voters

May 2019 – Present — **Physics/Math/Astronomy Board for Student Advocacy**, *Math Initiative Lead*
- 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 – May 2018 — **Information Systems & Security Society (ISSS)**, *Communications Officer*
- 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

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."
- Empirically motivated why students should work to close 10% gap in STEM voter turnout rates