

# SANJIT BHAT

## Aspiring Systems Security Researcher

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✓ U.S. Citizen — Eligible to work in the U.S. with no restrictions

## EXPERIENCE

### Undergraduate Researcher (advisor Hovav Shacham)

#### The University of Texas at Austin

📅 July 2020 – Present    📍 Austin, TX

- Designed **formal verification framework** using **Python** and **Z3** to find security-critical bugs in **Linux Kernel** eBPF verifier
- First-author** of paper in submission at top security conference

### Research Scientist Intern

#### Gradient Technologies

📅 January 2021 – August 2021    📍 Boston, MA

- Devised **cryptographic protocol** for **field upgrading** secure enclave **bootloader** while maintaining **trust** in hardware/software stack
- Implemented **Go** tool to perform **RSA certificate signing** with keys **secret shared** across multiple employees and secure enclaves

### Software Engineering Intern

#### RetailMeNot

📅 May 2020 – August 2020    📍 Austin, TX

- Deployed **Kubernetes Vertical Pod Autoscaler** to **AWS** clusters
- Measured **autoscaling** performance using custom **Rust** app
- Developed **organization-wide best practices** for autoscaling

### Student Researcher (advisors Srini Devadas and Aleks Mądry)

#### MIT Program for Research in Math, Engineering, and Science (PRIMES)

📅 January 2017 – August 2019    📍 Cambridge, MA

- Studied website **information leakage** and designed state-of-the-art **deep learning** model that exploits multi-modal sequence data
- First-author** of paper **published** at top privacy conference

## PROJECTS

### Multithreaded and Concurrent Web Server in Rust

📅 May 2020

- Architected **concurrency model** to use **Rust thread safety** features
- Implemented **database** to **asynchronously** handle **XMLHttpRequests**
- Evaluated **scaling performance** and deployed **unit tests** in **CD pipeline**

### Collaborative Music Synthesis

📅 February 2019

- Enabled **multiple users** to join together and **synthesize music** in **real time** using laptop webcams as instrumental interfaces
- Integrated **OpenCV**, **Google Firebase**, and **JavaScript** for **gesture recognition**, **synchronized databases**, and **music generation**
- Won **first place** at Blueprint — **MIT's premier high school hackathon**

## EDUCATION

### B.S. in Computer Science (Turing Scholars Honors Program)

#### University of Texas at Austin

📅 May 2022

Key Coursework:

- Systems/Security:**
  - Grad Computer Security
  - Grad Distributed Systems Verification
  - Grad Intro to Systems Verification
  - Grad Cybersecurity Law & Policy
  - Honors Concurrency
  - Honors Operating Systems
  - Honors Computer Architecture
- Misc:**
  - Honors Data Structures
  - Honors Linear Algebra
  - Honors Discrete Math

GPA: 3.9/4.0

## TECHNICAL SKILLS

**Languages:** Python (5/5), C/C++ (4/5), Go (4/5), Rust (3/5), Java (3/5), Verilog (3/5)

**Tools:** Z3, Kubernetes, TensorFlow

## TEACHING

- TA:** *Honors* Intro to CS Research    2021  
Instructor: Calvin Lin (UT Austin)
- TA:** Computer Architecture    2020  
Instructor: Sid Chatterjee (UT Austin)
- Lead Mentor:** Security Directed Reading Program, UT Austin Turing Scholars    2020

## AWARDS

- Ehren Kret Endowed Scholarship**  
UT Austin Computer Science    2019, 2020
- Scholar**  
Regeneron Science Talent Search    2019  
– Nation's oldest and most prestigious science and math competition
- First Place**  
MIT Blueprint Hackathon    2019  
– MIT's premier high school hackathon
- Gold Level**  
USA Computing Olympiad    2016  
– Nation's most prestigious high school competitive programming competition