

# SANJIT BHAT

## Aspiring Researcher & Socially Conscious Tech Enthusiast

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in [linkedin.com/in/sanjit-bhat](https://www.linkedin.com/in/sanjit-bhat)    📄 [github.com/sanjit-bhat](https://github.com/sanjit-bhat)    🏠 Google Scholar  
☑ U.S. Citizen — Eligible to work in the U.S. with no restrictions

## EXPERIENCE

### Software Engineering Intern

#### RetailMeNot

📅 May 2020 – August 2020    📍 Austin, TX

- Deployed **Kubernetes Vertical Pod Autoscaler** to **prod. AWS** clusters
- Ran **autoscaling** experiments using custom **Rust** app and **CD pipeline**
- Developed **organization-wide best practices** for autoscaling

### Undergraduate Researcher (advisor Hovav Shacham)

#### The University of Texas at Austin

📅 January 2020 – Present    📍 Austin, TX

- Applied **signal processing** techniques on **JavaScript Web Audio API** to construct **indirect timers** that undermine **browser security**
- Currently working on **formally verifying** central part of **Linux Kernel**

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

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

📅 January 2017 – August 2019    📍 Cambridge, MA

- Developing Novel Classifiers for Website Traffic Analysis
  - Studied website **information leakage** and designed state-of-the-art **deep learning** model that exploits multi-modal sequence data
- **First-author** of paper **published** in Privacy Enhancing Technologies Symposium — top **security and privacy** conference
- Improving the Efficiency of Robust Machine Learning
  - Developed **asynchronous parallel** procedure for training **robust machine learning models** and analyzed its effects on **optimization**
  - Demonstrated **26× speed improvement** and placed 300/2000 at **Regeneron STS** — nation's top high school science competition

## 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 2023

Rel. Coursework:

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

GPA: 3.93/4.0

## TECHNICAL SKILLS

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

**Frameworks:** Kubernetes, TensorFlow

## AWARDS

- **University Honors**
  - UT Austin 2019, 2020
- **Ehren Kret Endowed Scholarship**
  - UT Austin Computer Science 2019
- **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
- **Semifinalist**
  - Siemens Competition 2017
    - Premier science research competition
- **Gold Level**
  - USA Computing Olympiad 2016
    - Nation's most prestigious high school competitive programming competition
- **Eagle Scout**
  - Boy Scouts of America 2016

## PERSONAL INTERESTS

Singing, cooking, reading books and articles, watching documentaries, and learning more about the world's open problems