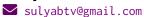
# Sulyab Thottungal Valapu



in sulyab

sulyabtv

sulyabtv.github.io

# **Research Interests**

My research centers on Internet measurement and protocol design to support decentralization and counteract consolidation on the Internet. Recently, I have been studying IPv6 adoption and the privacy risks and opportunities created by the shift to IPv6. Previously, I focused on decentralized reputation mechanisms for blockchain applications.

## **Experience**

2021 -

- ♦ **University of Southern California** | Graduate Teaching Assistant
  - Teaching Assistant for Fundamentals of Computation (Spring '21, Fall '24), Intro to Algorithms and Theory of Computing (Fall '21), Intro to Computer Systems (Spring '25), Intro to Computer and Network Security (Spring '22), and Database Systems (Summer '24, Summer '25).

2018 - 2020

- ♦ **Arista Networks** | Software Engineer
  - Developed Network Layer software for Arista EOS®
  - Involved in all stages of software development process including design, development, deployment, debugging and maintenance

## **Education**

2021 -

- ♦ **Ph.D., University of Southern California** Computer Science.
  - Advised by Prof. John Heidemann
  - Member of Analysis of Network Traffic (ANT) Lab
  - GPA: 3.96/4.0

2014 - 2018

- ♦ **B.Tech., IIIT Allahabad** Information Technology.
  - GPA: 9.37/10. Graduated with Honors.

#### **Publications**

### **Conference Proceedings**

- Dipsy Desai, Kicho Yu, and **Sulyab Thottungal Valapu**. "Geofeed Adoption and Authentication". In: *NOMS 2025-2025 IEEE Network Operations and Management Symposium*. ISSN: 2374-9709. May 2025, pp. 01–08. © DOI: 10.1109/NOMS57970.2025.11073659.
- Sulyab Thottungal Valapu, Aritri Saha, Bhaskar Krishnamachari, Vivek Menon, and Ujjwal Guin. "Reward-Based Blockchain Infrastructure for 3D IC Supply Chain Provenance". In: 2025 IEEE International Symposium on Hardware Oriented Security and Trust (HOST). ISSN: 2765-8406. May 2025, pp. 370–380. © DOI: 10.1109/HOST64725.2025.11050057.
- **Sulyab Thottungal Valapu**, Tamoghna Sarkar, Jared Coleman, Anusha Avyukt, Hugo Embrechts, Dimitri Torfs, Michele Minelli, and Bhaskar Krishnamachari. "DARSAN: A Decentralized Review System Suitable for NFT Marketplaces". In: *Blockchain ICBC 2023*. Ed. by Qin Wang, Jun Feng, and Liang-Jie Zhang. Cham: Springer Nature Switzerland, 2023, pp. 3–20. ISBN: 978-3-031-44920-8. **©** DOI: 10.1007/978-3-031-44920-8\_1.

#### **Preprints**

- Alex Sotiropoulos, **Sulyab Thottungal Valapu**, Linus Lei, Jared Coleman, and Bhaskar Krishnamachari. *Crowd-SFT: Crowdsourcing for LLM Alignment*. June 2025. **9** DOI: 10.48550/arXiv.2506.04063. arXiv: 2506.04063[cs].
- Sulyab Thottungal Valapu and John Heidemann. Towards a Non-Binary View of IPv6 Adoption. July 2025. O DOI: 10.48550/arXiv.2507.11678. arXiv: 2507.11678[cs].

#### **Technical Reports**

Sulyab Thottungal Valapu and Bhaskar Krishnamachari. A Survey of Probabilistic Micropayment Schemes. Tech. rep. IEEE Blockchain Technical Briefs, Mar. 2022.

# **Skills**

Languages ⋄ <u>Proficient:</u> Python • C • C++

Familiar: Rust • WebAssembly • Java

# Miscellaneous Experience

#### **Internships**

- Designed and implemented a blockchain-based protocol for intelligent autonomous vehicles to exchange messages and purchase services.
- Explored the concept of blockchain branching to tackle scaling limitations

#### **Awards and Achievements**

2017 💠 Dean's Merit List, IIIT Allahabad

#### **Activities**

2017

♦ Core Team member of Hack In The North, the largest student-led hackathon in India

2022, 2023

Research Coach for the Viterbi Summer Institute, a program by the USC Viterbi School of Engineering designed to offer incoming freshmen from underrepresented backgrounds an introductory research experience.

#### **Selected Coursework**

Systems  $\diamond$  Advanced Computer Networking

Networked Systems in Cloud Computing

**Internet Measurement** 

Autonomous Cyber-Physical Systems

Applied Cryptography Network Security Operating Systems

> > Natural Language Processing

Artificial Intelligence