Siddhant Kulkarni

✉ kulkarni.siddhant.03@gmail.com   📞 +91 8329074058   ↖ sidddk.github.io   ⬡ sidddk   in siddhantkulkarni

Education

B.E. Computer Science with a Minor in Data Science,   October 2021 – August 2025 | Goa, India
Birla Institute of Technology and Science, Pilani
CGPA: 9.18
> Institute **Merit Scholarship** Awardee - tuition fee waiver for excellent academic performance (**top 3%**)
> Relevant Courses: **Machine Learning***, **Foundations of Data Science**, **Probability and Statistics**, **Linear Algebra**, Computer Networks, Network Programming, Operating Systems, Calculus, Differential Equations (* ongoing)

Professional Experience

Jio Platforms, *Summer Intern*   May 2023 – July 2023 | Hyderabad, India
- Part of **Jio Engage** ↗ worked on developing models to create **face filters** to **boost user engagement**
- Implemented various **semantic segmentation** models for hair segmentation using **PyTorch** and **Keras**
- Integrated the hair segmentation model with a **face detection** pipeline to create a **segmentation mask** of hair, achieving a 98% pixel accuracy and a 91% mean IOU

Research Experience

Improving Adversarial Attacks using Membership Inference   August 2023 – present
- Exploring various **membership inference attacks** how they can be leveraged to enhance **adversarial attacks** under the guidance of *Dr. Hemant Rathore* ↗
- Investigated and proposed **countermeasures**, assessing **feasibility** and **performance**

Data, Systems and High Performance Computing Lab   November 2023 – present
- Working under the guidance of Dr. Arnab K. Paul ↗ on the **mutability of Ethereum smart contracts** post deployment using the **EIP-2535 Diamond Standard** while ensuring the preservation of trust within the system
- Setup a private multi-client **proof-of-stake** Ethereum testnet and monitored metrics using **Prometheus** and **Grafana**

Teaching Experience

Birla Institute of Technology and Science, Pilani, *Undergraduate Teaching Assistant*
- Developed and managed **Verilog** and **x86 assembly** programming labs for CS F241: Microprocessors and Interfacing (Spring 2024) under *Dr. Gargi Sanket Prabhu* ↗
- Facilitated **Prolog** programming labs, conducted tutorials and doubt sessions for CS F214: Logic in Computer Science (Fall 2023) under *Dr. A Baskar* ↗

Awards

Vimarsh 5G Hackathon Winner,
Bureau of Police Research and Development (BPRD), Ministry of Home Affairs, Department of Telecom (DoT) and TCoE-India
- Awarded first place in a **national hackathon** ↗ focused on addressing the needs of law enforcement agencies
- Developed a winning solution for the problem statement '**Secure 5G Routing Framework for a Private Network**', won a prize of **Rs. 1,50,000**

Volunteering

Nirmaan Organization
- Part of Project Shiksha, an initiative focused on preparing students from neighbouring underprivileged areas for the JNVST scholarship examination
- Took an active part in teaching and mentoring over 20 students, 2 of whom successfully cleared the exam

Peer Mentorship Program
- Provided guidance and support to first-year students as their first point of contact for both academic and personal concerns