

A PRANAV SHRIRAM, B.Tech (CSE)

Gender : Male
Date of Birth : 22/12/1999
Email : pranavshriram99@gmail.com
Contact : +91-9677019406



Educational Qualification

Year	Degree/Examination	Institution/Board	CGPA/Percentage
2018-2022	B.Tech- CSE	NIT, Trichy	9.34
2018	Class XII	DAV Boys Senior Secondary School, Gopalapuram Chennai, CBSE	98.2%
2016	Class X	DAV Boys Senior Secondary School, Gopalapuram Chennai, CBSE	10

Academic Achievements

- Co-authored a research paper on the topic - "Find Thy Neighbourhood: Privacy-Preserving Local Clustering" set to be published at the PoPETs international conference and can be found <https://eprint.iacr.org/2022/1727>
- Co-authored a research paper on the topic - "Ruffle: Rapid 3-Party Shuffle Protocol" which is under final review at the PoPETs international conference
- Stood **Second** among **300+** students in AISSCE 2018 and secured first in the subjects Chemistry, English and Computer Science

Work/Internship Experience

- Analyst at Goldman Sachs** *Jun 2022 - Present*
 - Middleware developer using languages and frameworks such as Java, Spring and Prometheus
 - Designed and implemented various product features which were successfully deployed in the production environment
 - Optimised multiple API endpoints by removing unnecessary API calls, combining API calls to common destination services and by using multithreading
 - Designed and implemented a new alerting framework using Prometheus
- Research intern at IISc Bangalore** *Jan 2022 - May 2022*
 - Using GraphSC framework and state-of-the-art SWIFT framework solved the problem of secure local clustering. Further details can be found at <https://eprint.iacr.org/2022/1727>
 - The second publication "Ruffle: Rapid 3-Party Shuffle Protocol" describes a new state-of-the-art secure shuffle protocol which further optimises the GraphSC framework
- Summer Analyst at Goldman Sachs** *June 2021 - July 2021*
 - Optimised the number of API calls being made by services to a central service
 - Implemented a push subscribe model using Kafka in place of the API call model to push data at regular intervals for real time consumption by other services
 - 1 - 1.5 million API calls which were being made every day were cut down to message consumptions every 10 minutes resulting in a significant performance improvement of 99.7%

- **Summer Internship at Market Simplified** May 2019 - Jun 2019
 - o Designed an interactive flowchart builder using ReactJS and HTML5
 - o Information cards can be added to the flowchart and associations between cards are automatically adjusted upon moving the cards using a drag and drop mechanism

Other Projects

- **Privacy Preserving Pandemic management** Feb 2022 - May 2022
 - o Used Self Sovereign Identity for secure issuance and verification of vaccine certification and virus testing.
 - o Designed contact tracing using the GraphSC framework to ensure privacy.
- **Criminal Smart Contracts using solidity** September 2021 - October 2021
 - o Implemented the works of “Key Theft” and “Leakage of Secret” using concepts such as Zero Knowledge Proofs and Fiat Shamir heuristic from the paper “The Ring of Gyges: Investigating the Future of Criminal Smart Contracts” by Ari Juels et al.
- **Energy Efficient Clustering and Routing in Wireless Sensor Networks** December 2020
 - o Coded the work “Genetic algorithm for energy-efficient clustering and routing in wireless sensor networks” by Wang et al in Python and analysed it’s performance for sample data sets.
- **Inferno** April 2020 - June 2020
 - o Worked on a mini game for the college fest Festember ‘20, built using ReactJS and NodeJS. The game had a footfall of over 500 people.

Technical Skills and Certifications

- *Programming Languages* : C, C++, Java, Python, Javascript, Golang, Solidity
- *Web Development* : Springboot, Spring, Kafka, HTML, CSS, NodeJS, MongoDB, Bootstrap, ReactJS, MySQL, Prometheus, Grafana
- *Tools* : Git, VSCode, Postman, Matlab, Splunk
- *Operating System* : Ubuntu, Windows

Positions of Responsibility

- **Software Developer, DELTA Force, NIT Trichy** Aug 2019 - March 2021
 - o Web ops coordinator in college fests
 - o Conducted workshops on various topics such as Algorithms, Blockchain, Web Development etc.
- **Manager, Dalal Street, Pragyan-Technical Fest of NIT Trichy** April 2020 - June 2020
 - o Managed a multiplayer virtual stock market game for Pragyan '21 using gRPC API written in Golang to support hundreds of concurrent requests and React for frontend.

Extracurricular Activities

- Volunteered for various activities carried out by NSS at NIT Trichy
- Secured **First** place among 100+ teams in **Kalpakkam Atomic Research Centre National Quiz'15**.
- Secured **Third** place among 500+ teams at the **Tata Crucible Campus Quiz ' 20**.
- Completed 6 grades in piano certified by Trinity Music College London.
- Member in Codeforces (Handle:Pranav22, Rated as Candidate master).