

# GITA ALEKHYA PAUL

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## EDUCATION

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**National University of Singapore** August, 2025 - August, 2027 (Expected)  
*Master of Science in Digital Financial Technology* Singapore  
CGPA: 4.5/5

**SRM Institute of Science and Technology** June, 2019 - May, 2023  
*B.Tech in Computer Science and Engineering with specialisation in Cyber Security* Chennai, India  
CGPA: 9.73/10 ♦ Silver Medalist ♦ First Class with Distinction

## WORK EXPERIENCE

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**NUS FinTech Lab** May, 2026 - August, 2026  
*Research Assistant* Singapore

Developed Hypha, a research prototype for task-scoped data access in agentic finance, where agents prove dataset relevance through zero-knowledge metadata queries before raw records are exposed. Designed the access pipeline around enforceable delegations, confidential inference, post-inference revocation, and signed audit trails for regulated financial use cases.

**Asian Institute of Digital Finance, NUS** August, 2025 - September, 2025  
*Part-time Research Assistant* Singapore

Contributed to a multi-agent, adaptive-learning edtech product by setting up the codebase, wrapping the LLM backend to stream generative UI from agents to the frontend, coordinating multiple sub-module sites behind a common SSO, and containerizing the application for production deployment.

**Collab.Land** October, 2022 - June, 2025  
*Lead Software Engineer, Research and Development* Remote

Maintained software for 4.5M+ active users across 59K+ Discord and Telegram communities. Launched a SocialFi product with 10K+ users, launched **SmartTag** [Link] enabling smart account wallets via account and key abstraction. Developed PoC integrating LLM agents for on-chain actions and built data pipelines for analytics. Worked on novel identity verification using steganography and machine learning, built multi-agent economic systems for **MotherDAO** [Link].

**MITACS Globalink Research Internship @ ÉTS Montreal** July, 2022 - October, 2022  
*Research Intern (Fully-funded, 12 weeks)* Montreal, Canada

Secured a fully-funded MITACS Globalink 2022 Research Internship under Prof. Julien Gascon-Samson at ÉTS. Proposed a refreshed architecture reducing network calls by 25%, achieving a scalable 'opinionated mesh' solution that improved network reach by 50%, tested on 400+ subscribers during a 12-week project on MQTT-based middleware.

**Quinence** January, 2022 - March, 2022  
*Backend and Smart Contract Developer Intern* Remote

Optimized indexers and NFT marketplace services, reducing query latency by 30% on Zilliqa blockchain. Set up scalable infrastructure for Aqilliz Wishworld's first NFT sale, handling 1,000+ NFTs, and co-developed smart contracts for the \$380K+ valued Soulless Citadel NFT collection.

**Hoppscotch India Private Limited** June, 2021 - September, 2021  
*GitHub Extern Summer 2021* Remote

Worked on the first version of the CLI for the Hoppscotch API runner ecosystem, with over 100,000+ users and 63K+ GitHub stars. Hoppscotch users can use this CLI for automated testing of the tests in the collection JSON in a CI environment.

**NetSPI** June, 2021 - July, 2021  
*Cyber Security Trainee* Remote

Received training in web application security and the different methods of attack and defense. Shadowed the instructors on live projects to learn how the work is done in the industry. Helped with documenting client requirements. Presented a webinar on JSON deserialization attack in Node.js.

**Amazon AWS Amplify CLI** January, 2021 - April, 2021  
*MLH Fellow Spring 2021* Remote

Worked on the DX of the Amplify CLI init workflow. Helped find bugs and fixed them in the open-source repository. Made a developer documentation website for the easier onboarding of future contributors. During the fellowship, I worked on a single-thread Reddit clone to demonstrate the use of Amplify CLI. Won the MLH Fellowship CTF.

Created Zapier Integrations for the company to integrate into the company APIs, facilitating real-time data storage and notifying users and admins of events. Worked on webRTC integrations to facilitate the conduction of online webinars.

## TECHNICAL SKILLS

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<b>Languages</b>	C, C++, Python, JavaScript, TypeScript, SQL, Java, Solidity, SCILLA
<b>Web Technologies</b>	React.js, Node.js, Next.js, Express.js, MongoDB, Redis, Postgres, Loopback 4
<b>Hardware</b>	ESP32, Arduino, Raspberry Pi, NodeMCU, Blynk IoT, IFTTT
<b>Blockchain</b>	Zilliqa, Ethereum, Smart Contracts, Multi-party computation, DIDs ZK-proofs, Chain abstraction, ERC-4337 AA, ERC-7710 Delegations, ERC-8004 Trustless Agents, x402 Agentic Payments
<b>Data Analytics and AI/ML</b>	BigQuery, Dune Analytics, LLM Fine-Tuning, LangChain, LangGraph, LangSmith Google A2A, Anthropic MCP, ElizaOS
<b>Cyber Security</b>	Linux, Network Security, Web Pentesting, Image Forensics
<b>Networking &amp; Cloud</b>	AWS, GCP, Docker, Edge Computing, Distributed Networks, MQTT, Wireless Mesh

## RESEARCH AND CERTIFICATIONS

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**Best Paper @ 2023 2nd International Conference on Vision Towards Emerging Trends in Communication and Networking Technologies (ViTECoN)** 5th May, 2023  
*"Implementing Dead Letter Exchanges in MQTT and Proposing a Broker Failure Algorithm Utilizing Blockchain DNS"*  
**DOI:** [10.1109/ViTECoN58111.2023.10157491](https://doi.org/10.1109/ViTECoN58111.2023.10157491) *Published*

**2023 Third International Conference on Advances in Electrical, Computing, Communication and Sustainable Technologies (ICAECT)** 5th January, 2023  
*"Improving Fault Tolerance and Tackling Broker Failure in MQTT through Blockchain"*  
**DOI:** [10.1109/ICAECT57570.2023.10118032](https://doi.org/10.1109/ICAECT57570.2023.10118032) *Published*

**Gold Medal for Research @ SRM Research Day 2022** 1st March, 2022  
*"A Novel Pipeline for Compressing Image Buffers in Remote Education Video Conferencing using Harris Corner Detection and Pixel Map Array"*  
**DOI:** [10.1109/ICECCT56650.2023.10179787](https://doi.org/10.1109/ICECCT56650.2023.10179787) *Published: ICECCT, 2023*

**Gold Medal for Research @ SRM Research Day 2021** 1st March, 2021  
*"Energy Efficient Ad-hoc Network using Multicast Tree for Wireless Sensor Applications"*  
**DOI:** [10.1109/ICMNBC56175.2022.10032031](https://doi.org/10.1109/ICMNBC56175.2022.10032031) *Published: ICMNBC, 2022*

## ACCOMPLISHMENTS AND AWARDS

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**Top 12 Finalists** September, 2025  
*TikTok TechJam 2025* ♦ <https://github.com/gitaalekhyapaul/techjam> *Singapore*

**1st Prize - Lit Protocol Track & Supra Standout Projects** December, 2024  
*ETHIndia 2024* ♦ <https://github.com/gitaalekhyapaul/supranova> *Bangalore, India*

**1st Prize - Nethermind: Best Agentic Project** December, 2024  
*Unfold 2024* ♦ <https://github.com/gitaalekhyapaul/skynet-monorepo> *Bangalore, India*

**2nd Prize - Okto Wallet Red Envelope Smart Contract Track** October, 2023  
*Unfold 2023* ♦ <https://github.com/gitaalekhyapaul/hera-pheri> *Bangalore, India*

**Quadriatic Funding Recipient** February, 2023  
*ETHForAll 2023* ♦ <https://github.com/gitaalekhyapaul/ethforall-delinzk> *Remote*

**Winner, Track: Best use of Polygon ID** December, 2022  
*ETHIndia 2022* ♦ <https://github.com/gitaalekhyapaul/ETHIndia2022-SigmaSoiBois> *Bangalore, India*

**Best Blockchain Project Using Hedera** May, 2022  
*Rookie Hacks II* ♦ <https://github.com/gitaalekhyapaul/Rookie-Hacks-II> *Remote*

**Winner** October, 2020  
*Hack This Fall 1.0* ♦ <https://github.com/gitaalekhyapaul/shikshak> *Remote*

**4th Position Worldwide** October, 2020  
*HackTheMountains* ♦ <https://github.com/gitaalekhyapaul/fren> *Remote*

**Best First Year** March, 2020  
*Code2Create 2020 by ACM VIT* ♦ <https://github.com/gitaalekhyapaul/code2create2020> *Vellore, India*

<b>2nd Runner Up</b> <i>Hack36 by MNNIT Allahabad</i> ♦ <a href="https://github.com/gitaalekhyapaul/hack36">https://github.com/gitaalekhyapaul/hack36</a>	February, 2020 Allahabad, India
<b>3rd Prize</b> <i>Progate Webathon</i> ♦ <a href="https://github.com/gitaalekhyapaul/codely">https://github.com/gitaalekhyapaul/codely</a>	February, 2020 Chennai, India
<b>SIH Internals Winner from SRMIST</b> <i>Smart India Hackathon</i> ♦ <a href="https://github.com/gitaalekhyapaul/sih2020">https://github.com/gitaalekhyapaul/sih2020</a>	January, 2020 Chennai, India
<b>1st Prize</b> <i>Techknow 1.0 Hackathon</i> ♦ <a href="https://github.com/gitaalekhyapaul/project-imperium">https://github.com/gitaalekhyapaul/project-imperium</a>	October, 2019 Chennai, India

## POSITIONS OF RESPONSIBILITY

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<b>HackTheBox SRMIST</b> <i>Founder and Co-organizer</i>	February, 2022 - May, 2023
Established SRMIST's first security club officially backed by Hack The Box Meetups, organized South Asia's largest meetup with 750+ participants, and conducted cybersecurity sessions. Managed team operations and mentored members during CTF workshops.	
<b>GitHub Community SRM</b> <i>Founder and Admin</i>	May, 2021 - May, 2023
Founded SRM's first open-source community officially backed by GitHub Education, conducting internal sessions, developing a final year thesis management portal, and organizing events focusing on open-source and blockchain technologies addressing a crowd of 300+ at 'Unhashed,' introducing students to blockchain and guiding them on getting started with writing smart contracts.	
<b>Next Tech Lab</b> <i>Member</i>	September, 2020 - May, 2023
Contributed to Tesla Lab research projects, delivered talks to an audience of 50+ students in 'Tesla Tech Talks' series, and led a development team for the lab's website prototype.	
<b>Team Envision, Aaruush Committee, SRMIST</b> <i>Technical Team Member</i>	February, 2020 - January, 2022
Played a key role in Team Envision, managing a team of 4 to develop ticketing and registration systems for Aaruush, SRMIST's techno-college fest, used by over 2500+ students.	
<b>SRMKZILLA</b> <i>Associate Lead - Technical</i>	July, 2019 - June, 2021
Led SRMKZILLA's creative team as lead photographer and served as associate lead in the technical team. Collaborated with students and brands, delivering IoT development sessions to 100+ students during 'Tech-troduction' workshops.	