

Harsith Priyan S

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PROFESSIONAL SUMMARY

CS & AI **undergraduate** student with a strong foundation in **backend and full-stack engineering**, grounded in core computer science fundamentals. Experienced in designing and building **scalable RESTful APIs, authentication and authorization systems, and database-driven applications**, with a focus on **secure system design, performance optimization, and API security**. Interested in building scalable backend systems, with long-term focus on **DevSecOps, AI Security, and security-aware software engineering**.

EDUCATION

Bachelor of Technology (Artificial Intelligence), Newton School Of Technology, Rishihood University	2024 – 2028 CGPA: 8.5 / 10
Intermediate (Class XII), Amrita Vidyalayam Senior Scondary School	2023 – 2024
Matriculation (Class X), Amrita Vidyalayam Senior Scondary School	2021 – 2022

PROFESSIONAL EXPERIENCE

Security Researcher (Bug Bounty & Responsible Disclosure), <i>Independent</i>	2022 – Present
- Identified security issues in macOS-related components of Min Browser (open-source project). - Received acknowledgment from MakerDAO for responsibly disclosing a security vulnerability. - Conducted security testing on production web applications, focusing on authentication, authorization, and API security controls. - Applied OWASP Top 10 and secure coding principles to assess impact and recommend mitigations.	

PROJECTS

PokeQuest, Secure Location-Based Game Backend (Demo 📁 GitHub 📁)	November 2025
Tech Stack: Node.js, Express, MongoDB, TypeScript, JWT, MapLibre, OpenStreetMap, Nodemailer, Next.js - Designed and developed a scalable backend system for a location-based game using secure, location-aware REST APIs to support real-world discovery and capture mechanics. - Implemented JWT-based authentication and authorization, securing protected routes and improving session handling across user workflows. - Designed geospatial MongoDB schemas using 2dsphere indexing to support efficient proximity-based queries, reducing query latency by approximately 30–40%. - Built a spawn lifecycle and cooldown system to prevent request abuse, duplicate captures, and inconsistent state updates. - Applied input validation, structured error handling, and modular service architecture to improve backend stability and reduce runtime errors during testing. - Optimized location update processing by handling only meaningful distance changes, reducing redundant API calls by approximately 40% and lowering server load.	
Skill Sprint, Learning Progress Tracker (Demo 📁 GitHub 📁)	May 2025
Tech Stack: React.js, Tailwind CSS, Firebase, Firestore, Zustand, Firebase Authentication - Designed and developed a production-ready web application to track and manage learning progress across YouTube-based educational content. - Implemented secure user authentication and authorization using Firebase Authentication with Google OAuth, ensuring protected access and session management. - Designed and optimized Firestore database schemas to persist user progress with real-time data synchronization and efficient reads/writes. - Integrated Zustand state management to handle global application state, improving predictability, scalability, and component communication. - Built reusable, modular React components with Tailwind CSS, emphasizing clean UI architecture, maintainability, and responsive design. - Applied input validation, structured error handling, and secure data access rules to improve application reliability, performance, and security.	
LanScan, Local Network Discovery Tool (GitHub 📁)	March 2021
Tech Stack: Python, Scapy, Sockets, Networking (ARP, IPv4) - Developed a Python-based network discovery tool to identify active devices within a given IPv4 subnet using ARP-based scanning techniques. - Utilized Scapy's ARP probing to broadcast requests and collect IP-MAC address mappings from live hosts on the local network. - Implemented input validation using regular expressions to ensure correct IPv4 CIDR range formatting prior to initiating network scans. - Parsed and presented network enumeration results, improving visibility into connected devices and internal network topology. - Demonstrated understanding of network protocols, reconnaissance workflows, and internal attack surface discovery, aligned with security assessment fundamentals.	

SKILLS

Programming Languages: Python, JavaScript, TypeScript, Java, C++, Shell (Bash), HTML, CSS
Backend & Frontend Frameworks: Node.js, Express.js, RESTful APIs, JWT Authentication, Authorization, API Security, React.js, Next.js, Tailwind CSS, Zustand, React Native
Databases & Developer Tools: MySQL, MongoDB, Firebase, Firestore, Git, GitHub, Linux, Postman
Cybersecurity: OWASP Top 10, Vulnerability Assessment, Secure API Design, Authentication & Authorization, Network Security, ARP, IPv4, Reconnaissance, Responsible Disclosure

CERTIFICATES

Certified Ethical Hacker (CEH): Prompt Infotech
Certified Cyber Crime Investigator (CCI): Prompt Infotech
Learn the art of hacking through Programming (LAHTP): Selfmade Ninja