

Richu Joseph

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PROFESSIONAL SUMMARY

Versatile **Full-Stack Developer** and **Cybersecurity enthusiast** with a strong track record of building secure, high-performance web applications. Experienced in developing scalable platforms using modern tech stacks like **Next.js, TypeScript, and Drizzle ORM**, alongside integrating AI and IoT solutions. Proven ability to lead projects from concept to deployment, backed by multiple national hackathon victories, foundational startup experience, and a deep understanding of offensive and defensive security methodologies.

EDUCATION

St. Joseph's College of Engineering and Technology Palai, Kerala
B.Tech – Computer Science Engineering (Cybersecurity Specialization) **CGPA: 7.57** Oct 2023 – Jun 2027

EXPERIENCE & LEADERSHIP

St. Joseph's College of Engineering and Technology Palai, Kerala
Department Coordinator & College Ambassador 2025 – Present

- Direct the national-level tech fest as Department Coordinator, managing technical execution, event logistics, and leading cross-functional student teams.
- Drive community engagement and technical awareness across campus as the official College Ambassador for RoomNumber404.

Viswajyothi College of Engineering and Technology (VJCET) Vazhakulam, Kerala
Guest Speaker & CTF Facilitator 2025 – 2026

- Organized and conducted a Capture The Flag (CTF) event, delivering an instructional speech on cybersecurity methodologies and practical vulnerability exploitation.

TECHNICAL PROJECTS

FloorViz.ai (AI-Room-Visualizer) | *Next.js, TypeScript, Tailwind, AI Models* Private Repository

- Engineered an interactive 3D floor visualization platform targeting interior design and architecture.
- Integrated advanced generative AI models (OneFormer, uLayout) for automated semantic room segmentation and dynamic layout generation.

Hacker.AI | *Next.js, tRPC, xterm.js, Better Auth, Inngest* Private Repository

- Architected an AI-driven penetration testing platform featuring intelligent SOC monitoring for automated, continuous threat response and defense.
- Implemented an interactive in-browser terminal using xterm.js, scalable event queuing, and secure role-based authentication tailored for security analysts.

CampusGo | *React, TypeScript, Supabase, ESP32, C++* github.com/richujoseph/CampusGo

- Designed a smart, IoT-driven transit management system for tracking college bus fleets.
- Built a comprehensive digital dashboard featuring live GPS tracking and integrated hardware QR/barcode scanning modules for real-time passenger authentication.

Demokratia | *Next.js, PostgreSQL, Supabase, tRPC, Drizzle ORM*

demokratia.vercel.app

- Deployed a secure, high-performance election management platform providing real-time data visualization and secure administrative oversight for voting procedures.

AgroStack | *TypeScript, Next.js*

github.com/richujoseph/AgroStack

- Built a predictive agri-market platform combining AI-based price forecasting with secure digital forward contracts to protect farmers from seasonal market volatility.

NexusPrep | *TypeScript, Next.js*

Private Repository

- Developed a robust note management and organizational tool aimed at streamlining academic and professional study workflows.

Campus2Abroad | *TypeScript, Web Technologies*

Private Repository

- Created a student networking and connection platform designed to bridge the gap between local campus students and alumni studying abroad.

Automated Certificate Generator (CERT-GEN) | *Python*

github.com/richujoseph/CERT-GEN

- Programmed a Python utility to automate the mass generation of personalized event certificates by parsing data directly from CSV files, greatly reducing administrative overhead for tech fests.

Bash Port Scanning Tool | *Bash, Netcat, TCP/IP*

github.com/richujoseph

- Programmed a lightweight, highly efficient TCP port scanner in pure Bash to quickly scan IPs and domains, bypassing the need for heavy external dependencies during initial reconnaissance.

Custom QR Generator | *JavaScript, HTML/CSS*

github.com/richujoseph/QR_Generator

- Developed a fast, customizable web-based utility for generating dynamic QR codes.

CERTIFICATIONS & JOB SIMULATIONS

Cyber Job Simulation (Deloitte) | *Forge*

Feb 2026

- Completed practical tasks related to cybersecurity frameworks, risk assessments, and enterprise security mitigation strategies.

TryHackMe Pre-Security Path

Feb 2026

- Achieved top 155k global rank by completing 90 specialized security rooms.
- Mastered foundational concepts in networking, web application architecture, and Linux operating system structures required for advanced penetration testing.

Cybersecurity Bootcamp | *Technovaly*

Jan 2026

- Participated in an intensive bootcamp covering core principles of network security and vulnerability assessments.

Cybersecurity Analyst Job Simulation (TATA) | *Forge*

Dec 2025

- Engaged in simulated enterprise environments focusing on threat analysis, identity access management (IAM), and log review.

Introduction to Python Programming | *NPTEL*

Dec 2025

- Earned official certification from the Ministry of Education, Govt. of India, demonstrating proficiency in Python programming and computational thinking.

AWARDS & HACKATHONS

1st Prize – Best Innovative AI Solution | *Toshnxt Hackathon* 2026

- Won top honors for developing an Autonomous Agentic Penetration Testing & Intelligent Defense Platform, blending cybersecurity with generative AI agents.

1st Prize – District Cluster Hackathon | *Kerala Startup Mission (IEDC)* 2026

- Secured first place against regional teams by building a highly accurate predictive crop model aimed at solving real-world agricultural challenges.

1st Prize – CYA Capture The Flag (CTF) | *Collegiate Competition* 2025

- Achieved rank #1 in a college-wide cybersecurity competition by successfully solving complex challenges spanning web exploitation, cryptography, and network forensics.

TECHNICAL SKILLS

Programming Languages: TypeScript, JavaScript, Python, Bash (Shell Scripting), C++, C, HTML5/CSS3

Frontend & Frameworks: Next.js (14/16), React.js, Tailwind CSS, tRPC

Backend & Databases: Node.js, PostgreSQL, Supabase, Drizzle ORM, REST APIs

Cybersecurity & Networking: Nmap, Wireshark, Autopsy, sqlmap, Gobuster, Hydra, TCP/IP, OSINT

Tools & Environments: Git/GitHub, pnpm, Bun, Kali Linux, macOS, Ubuntu, ESP32 (IoT)

Core Competencies: Full-Stack Architecture, Penetration Testing, Semantic AI Integration, System Design