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Professional Summary

AI Security Engineer combining a rare **Mechatronics Engineering diploma (81%)** with B.E. CSE Cybersecurity. **IBM Z Datathon 2025 National Runner-Up** (\$500 + IBM Mentorship), **2 IEEE publications**, 50+ certifications. Proven ability to build distributed, secure systems at scale from mainframe (IBM Z) to cloud-native (AWS/GCP) deployments. Mission: engineer adaptive, intelligent security systems that outthink attackers.

Technical Interests: **Security Engineering · Cloud Security · AI Security · Distributed Systems**

Technical Skills

- **Languages:** Python, Java, C/C++, JavaScript/TypeScript, SQL, Bash, Rust
- **AI / ML:** TensorFlow, PyTorch, Keras, scikit-learn, OpenCV, HuggingFace, LangChain, JAX, U-Net, MobileNetV2
- **Cybersecurity:** Kali Linux, Metasploit, Burp Suite, Wireshark, Nmap, OWASP Top 10, Threat Detection, Incident Response
- **Cloud / DevOps:** AWS (EC2/S3/IAM/VPC), Google Cloud Platform (GCP), IBM Cloud (COS/Db2), IBM Z Mainframe, Docker, Kubernetes, Prometheus, Grafana, Loki, Nginx
- **System Design:** Distributed Systems, Microservices, REST APIs, JWT/RBAC, Zero-Downtime Deployments, Auto-Scaling
- **Web / Backend:** FastAPI, Flask, Django, React, Next.js 14, Redis, PostgreSQL, SQLite
- **IoT / Embedded:** Arduino, Raspberry Pi, ESP32, MQTT, Embedded C/C++
- **Mechatronics / Hardware:** PLC Ladder Logic, CNC, AutoCAD, SolidWorks, Robotics, HMI

Work Experience & Industrial Training

Cybersecurity Intern

RETECH Solutions Pvt. Ltd.

Jan 2026 (2 weeks)

Chennai

- Conducted penetration testing and vulnerability assessments; automated security audit reporting.
- Applied offensive/defensive security tooling in a real consulting environment; reduced manual audit time by 40%.

Artificial Intelligence Intern

RETECH Solutions Pvt. Ltd.

Jun – Jul 2024

Chennai

- Built end-to-end ML workflows and deployment pipelines; work directly scaled to production in HeartSeg AI and CSSS projects (12+ deployments).

Industrial Trainee — Electrical & PLC Dept. (SS+ Rating)

Brakes India Pvt. Ltd., Padi

Mar – May 2021

Chennai

- Designed electrical panels and programmed Siemens PLC ladder logic; maintained 99.9% uptime for critical industrial control systems.

Industrial Training — Quality & Stores Operations

MK Auto Components / Suprajit Engineering

Jul – Dec 2022

Ambattur / Kanchipuram

- Quality inspection (5 months) and inventory management (3 weeks) in high-volume manufacturing environments.

Featured Projects

Heart MRI AI — IBM Z Datathon 2025 (2nd Place National | \$500 + IBM Mentorship) github.com/Darkwebnew

Stack: Python, TensorFlow, MobileNetV2, IBM Z Mainframe, IBM Cloud COS/Db2, Grad-CAM

- Built high-performance CNN classifier on IBM Z Mainframe with <2s inference and Grad-CAM + Integrated Gradients XAI. Designed for scale process thousands of MRI images/day.
- Architected secure, distributed data pipeline using IBM Cloud Object Storage and Db2; reduced inference latency by 60% vs. baseline.
- Won \$500 + 3-month IBM mentorship + LICC access (\$10K+) + IBM Bangalore Labs visit.

WAF AI — AI-Powered Web Application Firewall (IEEE Conference + Journal — Published) github.com/Darkwebnew/Projectwork1

Stack: FastAPI, Isolation Forest + Random Forest, Docker (8 containers), Prometheus, Grafana, Redis, Nginx

- Engineered dual-ML threat detection system for SQLi, XSS, CSRF, and zero-day exploits; achieved 96.7% detection accuracy with <50ms latency.
- Designed zero-downtime, auto-scaling architecture with 8+ Docker containers, Prometheus/Grafana observability, and

auto Nginx rule generation.

CSSS — Clinical Scan Support System (IEEE Accepted — 100/100/100 reviews) github.com/Darkwebnew/Project-work2

Stack: FastAPI, Next.js 14, MobileNetV2, SQLite, JWT, OTP 2FA, RBAC, WeasyPrint

- Built full-stack distributed clinical AI platform: 89.51% accuracy on 217,875 medical images with Grad-CAM explainability.
- Designed 4-role RBAC workflow with OTP 2FA; automated PDF report generation and secure email delivery.

Gemma3 + JAX LLM Fine-Tuning — Google Tunix Hackathon (322 teams / 11,173 entrants) kaggle.com/sriramnvks

Stack: Gemma3 1B, JAX, TPU, RLHF, RLAIIF

- Fine-tuned Gemma3 1B using JAX-native Tunix library on TPU; implemented full RLHF/RLAIIF pipeline for step-by-step reasoning (chain-of-thought).
- Reduced inference latency by 35% through TPU optimization; structured `<reasoning>...<answer>` output format.

HeartSeg AI — Cardiac MRI Segmentation (94.8% accuracy)

github.com/Darkwebnew/Miniproject

Stack: TensorFlow, U-Net, Keras, Flask, OpenCV

- Automated LV/RV/myocardium segmentation; reduced clinical diagnosis time from hours to <60 seconds directly applicable to healthcare AI at scale.

Education

B.E. Computer Science & Engineering — Cybersecurity (Lateral Entry)

2023 – 2026

Saveetha Engineering College, Chennai (Anna University)

CGPA: 7.59

- Core: Ethical Hacking, Cloud Security, Digital Forensics, Cryptography, Distributed Systems, AI/ML.
- Notable: Smart IoT Devices (O: 90–100%), Project Work I (A+), Scrum Master (A+).
- Concurrent: IBM Z Datathon win, 2 IEEE papers, 50+ certifications, 12+ production projects.

Diploma in Mechatronics Engineering — First Class with Distinction

2019 – 2022

TVS CPAT (T.V. Srinivasan Polytechnic), Vanagaram, Chennai

81%

- 3.5-year Sandwich Programme with 3 industrial internships; C Programming Practical (100%), Final Year Project (95/100).

Key Certifications (50+ total)

- **Google Cybersecurity Professional** — 9 courses, Avg 96% Sep 2025
- **AWS Cloud Solutions Architect Professional** — 4 courses, 99–100% Mar 2025
- **Certified Ethical Hacking v12 (CEH)** — 4 courses, Avg 94% Aug 2025
- **Scrum Master Certification** — 4 courses, Avg 92% Aug 2025
- IBM Z Xplore Concepts | IBM Z Day 2025 AI&Data / Security | J.P. Morgan SWE Forage (Sep 2024)
- *Pursuing:* CEH Practical, AWS Security Specialty, OSCP

Research Publications

- **AI-Powered Web Application Firewall:** ML-based real-time detection. *IEEE Conference + Journal* — Published, 2025.
- **Clinical Scan Support System (CSSS):** Deep-learning diagnostics (89.51% accuracy, 217,875 images). *IEEE* — Accepted 2025, Reviews: 100/100/100.

Honors & Awards

- **IBM Z Datathon 2025 — 2nd Place National** | \$500 + IBM Mentorship + LICC (\$10K+) + IBM Bangalore Labs
- **Google Tunix Hackathon** — 322 teams / 11,173 entrants / \$100K prize pool
- **Smart India Hackathon 2025 — Shortlisted** (SIH 1555) | **Yukthi CTF Hackathon** — TN Police, 2024
- **Gold Medal** — TN State English Proficiency Test (2012) | **Yoga 1st Prize** — Sports Olympic Federation of India (2017)
- **100% Attendance Certificate** — 2nd to 10th Standard (9 consecutive years)

Community & Open Source

- Helped **100+ people** recover hacked accounts, trace stolen phones, and learn Linux fundamentals via online communities pro bono.
- Planning contributions to OWASP security projects and FastAPI/Streamlit open-source tooling.