PARIKSHITH B BILCHODE

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GitHub — LinkedIn — LeetCode — Portfolio

Summary

Computer Science undergraduate at RV College of Engineering with demonstrated expertise in backend engineering, cybersecurity, distributed systems, and machine learning. Designed and shipped production-grade systems spanning behavioral biometrics, applied cryptography, and operating system internals. Actively seeking software engineering internship roles.

Education

RV College of Engineering 2025 – 2028 (Expected)
B.E. Computer Science and Engineering (Lateral Entry) Bengaluru, India

PES Polytechnic College 2022 – 2025
Diploma in Computer Science and Engineering Aggregate: 98.5%

Relevant Coursework: Operating Systems, Data Structures & Algorithms, DBMS, Computer Networks, Cryptography & Information Security, Object-Oriented Programming, Computer Architecture

Technical Skills

- **Languages:** C, C++, Python, Java, JavaScript, R, Assembly (MIPS/ARM)
- **Frameworks & Web:** React.js, Flask, FastAPI, Django, Node.js, REST APIs, HTML5, CSS3
- **Cloud & DevOps:** AWS, Firebase, Supabase, Vercel, Render, Git, GitHub, CI/CD Pipelines, Docker
- **Databases:** MySQL, MongoDB, PostgreSQL
- **ML & Security:** Scikit-learn, PyTorch, TensorFlow.js, AES-256, Shamir Secret Sharing, Argon2id, OAuth 2.0, TOTP 2FA

Research & Projects

Core Developer – Entropy Prime (Zero-Trust Behavioral Biometrics SaaS) 2026 – Present
Tech: *FastAPI, React, Docker, PyTorch, TensorFlow.js, Argon2id, AWS* GitHub

- Architected a 1D-CNN inference pipeline to compute continuous biometric trust scores (θ) from keystroke dynamics and neuromuscular jitter via real-time client-side processing, serving 100+ active user sessions.
- Trained a Deep Q-Network (DQN) to adaptively tune Argon2id hashing parameters based on live risk indicators; achieved full neutralization of automated bot traffic ($\theta < 0.1$) through silent honeypot redirection.
- Deployed an unsupervised deep autoencoder inside a containerized FastAPI service to flag anomalous login patterns and initiate passive session re-authentication workflows.

Technical Experience

Backend & Security Engineer – ShamirSecurity (Distributed Password Vault) 2026
Tech: *Flask, Supabase, Node.js, React, AES-256, OAuth 2.0, TOTP 2FA* GitHub — Live Demo

- Designed a zero-knowledge secret distribution pipeline that splits credentials across decentralized nodes using Shamir's Secret Sharing (k-of-N threshold scheme) combined with AES-256 encryption.
- Integrated Google OAuth 2.0 and TOTP-based two-factor authentication, attaining sub-200ms average response latency across all vault credential operations.

Systems Developer – OS EL (Kernel Internals Explorer) 2026
Tech: *C, React, POSIX API, Scheduling Algorithms, Custom Heuristics* GitHub — Live Demo

- Devised a custom Weighted Dynamic Scheduler (WDS) incorporating interactive aging heuristics, cutting average process turnaround time by 22% relative to FCFS and Round Robin baselines.
- Implemented 6 native POSIX system call interfaces for low-level process synchronization and built real-time Gantt chart tracking analytics adopted by 30+ students.

Machine Learning Developer – Malicious URL Threat Detection 2025
Tech: *Django, Django REST API, Scikit-learn, Python, Render* GitHub — Live Demo

- Built an automated 15-feature extraction pipeline that elevated malicious URL classification accuracy to 94% across Phishing, Malware, and Benign categories.
- Packaged and deployed the classifier as a production Django REST API on Render, delivering deterministic multi-class inference with sub-500ms latency per request.

Achievements & Certifications

- **State Rank 2 (DCET 2025)** – Secured 2nd position among 20,000+ candidates in the Karnataka Diploma Common Entrance Test.
- **Model Context Protocol Workshop** – *NxtWave (May 2026)* → Studied agentic orchestration design patterns, Model Context Protocol, and AI automation frameworks.
- **MAHE Mobility Challenge** – *Manipal Academy of Higher Education (Apr 2026)* → Engineered secure Over-the-Air (OTA) firmware update pipelines, IoT infrastructure, and embedded systems modules.
- **Data Science for Engineers** – *NPTEL / MSDE Skill India (Mar 2026)* → Demonstrated proficiency in machine learning fundamentals, regression analysis, and statistical modeling.
- **Cybersecurity Project Certification** – *Alpha Tech Academy, Bengaluru* → Completed hands-on defensive security programs covering threat risk analysis and security tooling deployment.

Interests

Systems Engineering, Cryptographic Protocols, Adversarial Machine Learning, Distributed Infrastructure, Cricket