



Anvita B. Kulkarni

+91 9158353967 | anvita0817@gmail.com | github.com/anvii0 | Bengaluru, India

EXPERIENCE

BITS Pilani, Hyderabad

Jun. 2026 – Jul. 2026

Research Intern

Hyderabad, India

- Implemented an adversarially robust LoRa RF fingerprinting pipeline in Python/PyTorch for IoT device authentication, using contrastive self-supervised learning and a hybrid anomaly detection framework on raw IQ samples
- Evaluated the pipeline against FGSM, BIM, PGD, and C&W attacks using a physically calibrated adversarial evaluation methodology, achieving over 0.90 AUROC across adversarial and synthetic rogue-device (anomaly) detection

PES University

Jan. 2026 – May 2026

Teaching Assistant – Computer Networks

Bengaluru, India

- Mentored undergraduates in Computer Networks labs on networking protocols, socket programming, and packet-level analysis; debugged client-server assignments

Statnetics (CloudQA)

Jun. 2025 – Jul. 2025

Software & Cybersecurity Intern

Hyderabad, India

- Performed web application security assessments using OWASP methodologies, identifying and remediating vulnerabilities and tracking risk through to resolution
- Developed and deployed a full-stack DemoSaaS application (React, Node.js, MongoDB) simulating real-world customer workflows for the CloudQA automation testing platform
- Hosted test environments on AWS and Azure

PROJECTS

Immunological Supply Chain

2026

- Engineered a 17-stage Python pipeline over 340,000+ records across six datasets for supply chain routing
- Trained a GNN + PPO reinforcement learning routing agent, with FAISS-based vector retrieval
- Achieved 100% routing success with a 4% route-risk reduction over Dijkstra; paper submitted to Applied Intelligence (journal)

Gaming Chat Toxicity Classification (NLP)

- Built an NLP pipeline to classify League of Legends and Dota 2 chat messages as neutral, negative or derogatory, mapping existing LoL toxicity-report labels and building a weighted lexicon-based heuristic labeler (English and Russian keywords) for the unlabeled Dota 2 data
- Trained SVM (linear & RBF), Naive Bayes, KNN and Random Forest on TF-IDF features, and an FFNN and LSTM on pretrained GloVe embeddings; SVM (RBF) performed best at 83.2% test accuracy

CryptoVault SOC

2026

- Built a Flask banking-security simulator emitting five distinct event types (failed/successful login, dashboard access, withdrawal alerts, reconnaissance probing) as structured JSON audit logs (event_type, severity, username, source_ip, details)
- Implemented dual real-time log forwarding via UDP syslog to Wazuh and GELF/Syslog UDP to Graylog for SIEM ingestion, structuring and categorizing events by type and severity (e.g., LOGIN_FAILED, WITHDRAWAL_INITIATED, 404_NOT_FOUND) for brute-force and reconnaissance detection

Distributed Real-Time Drawing Board (Mini-RAFT)

2026

- Designed and implemented a RAFT-inspired consensus protocol from scratch across a 3-node Python replica cluster, handling timeout-triggered leader election, term-based voting, and real-time log replication
- Built a Node.js WebSocket API gateway with transparent leader discovery for zero-downtime failover; containerized and orchestrated the 4-service cluster with Docker Compose

Multi-Source Price Comparison Web Scraper

2025

- Built a full-stack Node.js/Express application to scrape and aggregate e-commerce listings, developed in a 5-member team using Git and an 8-stage CI/CD pipeline (ESLint, HTMLHint, Jest unit tests)

EDUCATION

PES University

Bengaluru, India

B.Tech, Computer Science & Engineering

2023 – 2027

Relevant Coursework: Operating Systems, Computer Networks, Database Management Systems, Machine Learning (NLP, Generative Models, LLMs), Cloud Computing, Digital Forensics & Incident Response (DFIR)

SKILLS, AWARDS & CERTIFICATIONS

Networking & Security: Wireshark, Scapy, TCPDump, iptables, SSL/TLS, HTTP, VPN, SIEM (Wazuh, Graylog), OWASP Security Testing

Software Engineering: REST APIs, Git, Unit Testing (Jest), CI/CD, Debugging, Docker, Linux, Node.js, React

Databases: SQL (MySQL, stored procedures & triggers), MongoDB (NoSQL)

Machine Learning: PyTorch, GNN, Reinforcement Learning (PPO), Contrastive Self-Supervised Learning, scikit-learn, TensorFlow, FAISS, Anomaly Detection, RF Fingerprinting, NLP, Generative Models, LLMs

Languages: C, C++, Python, JavaScript, Bash, .NET, Flutter, HTML

Data Analysis: Pandas, NumPy, Matplotlib, Seaborn

Cloud: AWS, Azure

Awards & Certifications: Flutter Application Dev · Introduction to Amazon EC2 · Introduction to Amazon Virtual Private Cloud (VPC) · DAC Scholarship Recipient (PES University) · Best Clean Tech Award at IIT Roorkee