# Hanna Varughese

• +91 8105887356 • Gmail • LinkedIn • GitHub

**B.Tech CSE (AI & ML) | Cybersecurity Honors Student**

Third-year Computer Science and Engineering student specializing in Artificial Intelligence and Machine Learning with a Cybersecurity Honors focus. Strong academic performance with hands-on experience in developing applications and solving problems through projects, hackathons, and research-driven coursework. Skilled in Python, Java, and C with practical expertise in database technologies and software development. Adept at working independently and collaboratively, with an emphasis on writing efficient code, building scalable solutions, and exploring AI and cybersecurity applications in real-world contexts.

## Education

Christ (Deemed to be University), Kengeri
B.Tech in Computer Science and Engineering (AI & ML) | Cybersecurity Honors
GPA: 3.86 / 4.0 (Cumulative) · Expected Graduation: 2027
Relevant Coursework: Data Structures & Algorithms, Machine Learning, Cybersecurity Fundamentals, Operating Systems, Database Systems.

## Projects

**ReverseTrap – Real-Time Conversational Risk Detection (Hackathon Project)**

- Developed a real-time AI system to detect and respond to honey-trap and persuasive chat risks.
- Built a custom dataset (1K+ entries) with Gradle pipelines for preprocessing and augmentation.
- Designed a semi-supervised ML pipeline (TF-IDF + Logistic Regression + Self-/Tri-Training) to assign risk scores (0–10) based on linguistic cues (urgency, romance, money, manipulation).
- Integrated LLMs (Gemini API / Ollama) to tailor conversational responses dynamically, benign, cautious, or defensive.
- Delivered via a Gradio web app with attacker/user interfaces, live risk alerts, drift detection, AI-assisted safe replies, and conversation logging.
- Tech stack: Python, scikit-learn, Gradle, TF-IDF, Gradio, Gemini API, Ollama.

**AI-Powered Finance Assistant – GPay Plugin (Hackathon Project)**

- Built a plugin prototype for Google Pay to assist with personal finance management.
- Implemented AI-driven features for budget tracking, spending insights, and financial recommendations.
- Used ML models to analyze transaction history and generate personalized savings suggestions.

**Pneumonia Detection Model (Machine Learning Project)**

- Implemented a CNN-based deep learning model to classify chest X-rays as Pneumonia or Normal.
- Preprocessed dataset with augmentation to improve generalization and reduce overfitting.
- Achieved high accuracy in binary classification, demonstrating potential in healthcare diagnostics.
- Tech stack: Python, TensorFlow/Keras, OpenCV, NumPy, Matplotlib.

**Web Development Internship – Cognifyz Technologies**

- Contributed to development of responsive and dynamic web applications during internship.
- Worked with HTML, CSS, JavaScript, and backend APIs to deliver user-centric solutions.
- Gained experience in collaborative development, version control (Git), and deployment workflows.

## Technical Skills

Programming Languages : Python, Java, C
Databases: MongoDB, SQL/DBMS
Web Development: HTML, CSS, JavaScript, REST APIs
AI/ML & Data Science: NumPy, Pandas, Scikit-learn, TensorFlow/Keras, Matplotlib.
Systems & Concepts: Data Structures & Algorithms, Operating Systems, Computer Networks, Cybersecurity.
Tools & Platforms: Git/GitHub, Linux

## Certifications

Technical Certifications

- AI Fundamentals – IBM SkillsBuild
- Introduction to Data Science – Cisco NetAcad
- Blockchain and its Applications – NPTEL
- Python: A Practical Approach – Udemy
- Web Design – FreeCodeCamp
- Introduction to Operating Systems – Scalar
- Introduction to Networks – Cisco NetAcad

Hackathons & Competitions

- HackSy (MITB x Kaspersky)
- Internal SIH Hackathon

## Extracurricular and Leadership

IEEE Student Branch – Executive Committee Member (Execom), CHRIST (Deemed to be University) (2024–Present)

- Facilitated collaboration between students and industry experts through IEEE-led initiatives.
- Gained leadership, teamwork, and organizational experience while contributing to the student tech community.