

UDAY KIRAN CHEERA

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PROFESSIONAL SUMMARY

Driven with boundless curiosity for exploring cutting-edge technologies including machine learning, cybersecurity and DevOps. Extensive hands-on experience through internships and research projects in algorithm development, predictive modeling, digital forensics, and ethical hacking. Proficient in Python scripting with expertise in penetration testing tools (Metasploit, Nmap) and specialized knowledge in Linux systems, containerization (Podman). Researching to tackle complex challenges in software effort estimation, network threat detection, and medical AI applications while continuously pushing technological boundaries.

EDUCATION

Jawaharlal Nehru Technological University Vizianagaram <i>B.Tech in Information Technology, Percentage: 76%</i>	May 2025 India
Sasi New Gen. Junior College Velivennu <i>Intermediate (12th Grade), Percentage: 94.4%</i>	May 2020 India
Sasi E.M High School Velivennu <i>SSC (10th Grade), GPA: 9.7%</i>	April 2018 India

EXPERIENCE

Cybersecurity Intern <i>Andhra Pradesh Space Application Center (APSAC)</i> <ul style="list-style-type: none">In Association with Blackbucks Engineering Private LimitedConducted threat analysis and vulnerability assessmentsDeveloped Honeypot applicationImplemented cybersecurity measures	January 2025 – May 2025 Andhra Pradesh, India
Research Intern - Software Engineering(Machine Learning) <i>National Institute of Technology, Warangal</i> <ul style="list-style-type: none">Developed hybrid machine learning models for software effort estimation, achieving 28% improvement in prediction accuracy over baseline methods using ensemble techniques combining Linear Regression, ANN, KNN, and SVMImplemented bio-inspired optimization algorithms (Firefly, Particle Swarm) with Analogy-Based Estimation, resulting in enhanced model adaptability across diverse project contextsConducted comprehensive feature engineering using Pearson correlation analysis and hyperparameter optimization with Hyperopt, reducing prediction uncertainty in Agile development environmentsPublished research findings contributing to software project planning methodologies and resource allocation frameworks	May 2024 – July 2024 Warangal, India
Cyber Forensics Intern <i>Innogeeks Technologies Private Limited</i> <ul style="list-style-type: none">Performed digital forensics investigations using industry-standard tools including EnCase, FTK Imager, and Autopsy for evidence acquisition and malware analysisDeveloped automated Python scripts for artifact extraction and forensic report generation, reducing investigation time by 40%Conducted security assessments using penetration testing tools (Metasploit, Nmap) in controlled environments, identifying critical vulnerabilities in network infrastructureContributed to incident response procedures and established digital evidence collection methodologies	July 2024 – August 2024 Vijayawada, India

TECHNICAL PROJECTS

Diabetic Retinopathy Detection using Quantum Enhanced Vision Transformers Final Year Project <ul style="list-style-type: none">Architected novel quantum-enhanced Vision Transformer model for early diabetic retinopathy detection, achieving 92% accuracy in classifying severity stages from retinal fundus imagesImplemented quantum computing simulations to enhance feature extraction capabilities, reducing computational complexity by 35% compared to classical approachesDeveloped end-to-end medical imaging pipeline with data augmentation, preprocessing, and model interpretability features using PyTorch and OpenCVCreated REST API deployment using FastAPI and Docker for real-time medical image analysis in clinical environmentsDemo Video	Dec 2024 – April 2025
Dynamic Graph Neural Network for Network Threat Detection	Feb 2025 – Apr 2025

- Developed real-time network security solution using PyTorch Geometric and custom GNN architecture, achieving 94% detection accuracy for zero-day attacks with low false positive rates
- Implemented temporal graph modeling of network traffic patterns to detect sophisticated threats that evade traditional signature-based systems
- Integrated GNS3 network simulation environment with Wireshark for comprehensive traffic analysis and threat pattern recognition
- Deployed containerized solution using Docker with automated alert systems for enterprise network monitoring
- GitHub Repository

WorkWise AI: Career Growth Platform with IBM Granite Models

Apr 2025 – May 2025

- Built AI-powered career guidance platform using IBM Granite models(For IBM Hackathon), supporting UN SDG 8 for decent work and economic growth
- Implemented personalized learning recommendation system and resume optimization tools using natural language processing
- Developed bias detection algorithms for fair labor practices and inclusive job matching using Flask and Bootstrap
- Integrated SME growth advisory features with actionable business intelligence and workforce development recommendations
- GitHub | Demo

Multi-Service Cybersecurity Honeypot System

Jan 2025 – Dec 2025

- Designed sophisticated honeypot infrastructure simulating SSH, HTTP, FTP, and Telnet services to capture and analyze attacker behavior patterns
- Implemented real-time threat intelligence dashboard using ELK Stack (Elasticsearch, Logstash, Kibana) for attack visualization and pattern analysis
- Developed automated threat categorization system generating actionable security insights for organizational defense strategies
- Created geolocation-based attack tracking with alerting mechanisms for immediate threat response

TECHNICAL SKILLS

Programming Languages: Python, Java, C/C++, JavaScript, R, Rust, SQL

Machine Learning & AI: PyTorch, TensorFlow, Scikit-learn, Keras, OpenCV, NLTK, Hugging Face Transformers, LangChain

Deep Learning: Vision Transformers, CNNs, RNNs, BERT, GPT

Data Science: Pandas, NumPy, Matplotlib, Seaborn, Jupyter, Feature Engineering, Statistical Analysis

Cloud & DevOps: AWS, IBM Cloud, Docker, Kubernetes, CI/CD Pipelines, Git

Web Development: Flask, FastAPI, React.js, Node.js

Databases: PostgreSQL, MongoDB, MySQL, Elasticsearch

Cybersecurity: Network Security, Digital Forensics, Penetration Testing, Threat Analysis, Security Auditing

Tools & Platforms: Linux, Vim, GNS3, Wireshark, Docker, ALTAIR AI Studio

KEY CERTIFICATIONS

Micromasters in Big Data Technology - Hong Kong University of Science and Technology

- Rochester Institute of Technology

Machine Learning Master - Altair (Professional AI/ML Certification)

Professional Certificate in Cloud Solutions Architecture - AWS

Professional Certificate in Blockchain for Business - Linux Foundation

Certified Oracle Database Foundations & AI with Machine Learning in Java

DevOps on AWS & Kubernetes and Cloud Native Technologies - Linux Foundation

LEADERSHIP & ACHIEVEMENTS

Technical Event Coordinator - ITYUKTA 2K24, JNTUGV (Jan 2024 - Mar 2024)

Technology Instructor - Community Service at SKP&TVR Municipal High School (Jun 2023 - Aug 2023)

Community Development Volunteer - Sikshana Foundation: Taught technology skills to 50+ underprivileged students

Research Publication - Contributed to software engineering research with measurable impact on industry practices

Open Source Contributor - Active explorer of machine learning and cybersecurity open source projects