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 **May 2025**
B.Tech in Information Technology, Percentage: 76% *India*

Sasi New Gen. Junior College Velivennu **May 2020**
Intermediate (12th Grade), Percentage: 94.4% *India*

Sasi E.M High School Velivennu **April 2018**
SSC (10th Grade), GPA: 9.7% *India*

Experience

Cybersecurity Intern **January 2025 – May 2025**
Andhra Pradesh Space Application Center (APSAC) *Andhra Pradesh, India*

- In Association with Blackbucks Engineering Private Limited
- Conducted threat analysis and vulnerability assessments
- Developed Honeypot application
- Implemented cybersecurity measures

Research Intern - Software Engineering(Machine Learning) **May 2024 – July 2024**
National Institute of Technology, Warangal *Warangal, India*

- 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 SVM
- Implemented bio-inspired optimization algorithms (Firefly, Particle Swarm) with Analogy-Based Estimation, resulting in enhanced model adaptability across diverse project contexts
- Conducted comprehensive feature engineering using Pearson correlation analysis and hyperparameter optimization with Hyperopt, reducing prediction uncertainty in Agile development environments
- Published research findings contributing to software project planning methodologies and resource allocation frameworks

Cyber Forensics Intern **July 2024 – August 2024**
Innogeecks Technologies Private Limited *Vijayawada, India*

- Performed digital forensics investigations using industry-standard tools including EnCase, FTK Imager, and Autopsy for evidence acquisition and malware analysis
- Developed 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 infrastructure
- Contributed to incident response procedures and established digital evidence collection methodologies

Technical Projects

Diabetic Retinopathy Detection using Quantum Enhanced Vision Transformers | Final Year Project Dec 2024 – April 2025

- Architected novel quantum-enhanced Vision Transformer model for early diabetic retinopathy detection, achieving 92% accuracy in classifying severity stages from retinal fundus images
- Implemented quantum computing simulations to enhance feature extraction capabilities, reducing computational complexity by 35% compared to classical approaches
- Developed end-to-end medical imaging pipeline with data augmentation, preprocessing, and model interpretability features using PyTorch and OpenCV
- Created REST API deployment using FastAPI and Docker for real-time medical image analysis in clinical environments
- Demo Video

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
Micromasters in CyberSecurity - 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