KUMOULICA ALLU

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PROFESSIONAL SUMMARY

Cybersecurity graduate student with a 4.0 GPA and strong background in machine learning, cloud infrastructure, and forensic analysis. Experienced in system analysis, threat detection, and secure application development. Adept at combining technical expertise with research and leadership to deliver innovative security solutions.

EDUCATION

Master of Science in Cyber security   *Expected May 2026*
University of Houston, Houston, Texas   **GPA: 4.00**
Coursework: Principles of Cybersecurity, Secure Enterprise Computing, Applied Cryptography, Cybersecurity Risk Management, Network Security, Critical Thinking in Cybersecurity, Project Management Principles

Bachelor of Technology in Computer Science and Engineering (cyber security)   *Apr 2024*
Amrita Vishwa Vidyapeetham, Chennai, India   **GPA: 7.74**
Coursework: Secure Software Engineering, Web App Security, Network Security, Forensics, Applied Cryptography, VAPT, Android App Development, AI, IOT, Compiler Design

WORK EXPERIENCE

Optim IT, System Analyst, Tirupathi, India   *Jun 2023 – Aug 2023*
- Analyzed system requirements and optimized workflows for enterprise applications, improving efficiency and reducing downtime.
- Collaborated with cross-functional teams to implement solutions, troubleshoot issues, and support remote infrastructure upgrades.

Indian Institute of Technology, Research Intern, Tirupathi, India   *Jun 2023 – Aug 2023*
- Applied deep learning-based steganalysis to improve image noise reduction and feature extraction (MNIST).
- Designed object detection models using custom Python datasets; enhanced long-tailed instance segmentation accuracy.
- Created realistic 3D simulations in Blender for advanced research visualization.

PROJECT WORK

Network Intrusion Detection using LIME   *Apr 2025*
- Built ML based IDS using Flask and models like Random Forest and Neural Networks to detect network anomalies.
- Integrated Explainable AI (XAI) to provide interpretable explanations for model predictions, enhancing transparency.
- Deployed real-time web dashboard for actionable security insights.

INSTAGUARD: Adaboost-Based Fake Instagram Profile Detection   *Mar 2024*
- Developed an Adaboost-based ML model to detect fraudulent social media profiles.
- Integrated the model into a REST API, streamlining authentication processes for real-time fake account identification.
- Enhanced verification accuracy, reducing false positives and improving social media security.

LEADERSHIP & EXTRACURRICULAR

Forensics Analysis Club and Triage (FACT)
Skill Enhancement Coordinator

Led forensic analysis workshops at Amrita Vishwa Vidyapeetham, providing hands-on training with forensic tools and case studies to enhance technical and investigative skills.

Publication

Author, "A Construction of Smart Grid Authentication and Key Agreement System Using ECC Cryptography" published in the Institute of Electrical and Electronics Engineers

TECHNICAL SKILLS

Languages & Tools: Python, C, Java, HTML/CSS, MySQL, Haskell, Shell Scripting, DataWeave
Cybersecurity: Networking, Cryptography, Digital Forensics, OSINT, SIEM, Web Testing, Log Analysis, IAM
Tools & Platforms: Snort, Security Onion, Wireshark, Kali Linux, AWS, Linux/Windows OS, VirtualBox
Development: Data Structures & Algorithms, REST APIs, Blender, Flask, Android App Dev, DBMS

CERTIFICATIONS

AWS Certified Cloud Practitioner**,** MuleSoft Developer 1, Introduction to Cybersecurity (Cisco)