

KUMOULICA ALLU

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PROFESSIONAL SUMMARY

Cybersecurity graduate student with expertise in cloud security, machine learning, and digital forensics. Skilled in building secure systems, analyzing threats, and applying AI for enhanced security insights. Driven by research and hands-on experience to develop practical, high-impact cybersecurity solutions.

EDUCATION

Master of Science in Cyber security

University of Houston, Houston, Texas

Expected May 2026

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

GPA: 7.74

Amrita Vishwa Vidyapeetham, Chennai, India

Coursework: Secure Software Engineering, Web App Security, Network Security, Forensics, Applied Cryptography, VAPT, Android App Development, AI, IOT, Compiler Design

WORK EXPERIENCE

Optim IT, API Security Analyst, Tirupathi, India

Dec 2023 – May 2024

- Worked extensively with MuleSoft's Anypoint Studio and Anypoint Platform to design, develop, and monitor APIs and integrations, ensuring secure data transmission and compliance with organizational security policies.
- Assisted in identifying and mitigating risks in integration workflows, enforcing authentication and authorization protocols within APIs to safeguard sensitive enterprise data.

Indian Institute of Technology, Research Intern, Tirupathi, India

Jun 2023 – Aug 2023

- Worked on multiple research projects related to steganography and steganalysis using deep learning techniques and the Image noising and denoising on MNIST dataset.
- Assisted in utilizing Blender for a project on 3D image modeling and Data Augmentation Strategies.

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

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