

Abtsega Tesfaye Chufare

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Education

Kalinga Institute of Industrial Technology (KIIT)

Expected graduation date: Jun. 2025

B.S. in Computer Science and Engineering | [Website](#)

GPA: 4.0

Relevant Courses: Web Software Construction, Big Data, OOP(C++), Security in Software Systems, Algorithms and Data Structures I and II (C++), Computer Architecture, Discrete Mathematics, Cryptography

ALX AFRICA

Expected graduation date: Graduated on March 2023

B.S. in Computer Science and Engineering | [Certificate](#)

GPA: 97/100

Relevant Courses: Network Security, API Integration, Backend Softwares (Express, NodeJs, Django), Database (SQL, MongoDB)

Experience

KIIT Research Center | [Certificate](#)

March. 2022 - Present

Research Intern

Researching, Cybersecurity, Teaming

- Published a research paper on Cybersecurity Imminent Threats in Higher Education with its Solutions.
- Assisted with maintenance and development of computational tools previously developed in the lab.
- Executed high risk cyber security incidents by working in conjunction with response partners.
- Mentored junior staff, provide development programs for such staff and ensure technical progress of their abilities.

JP Morgan CHASE CO Virtual Internship | [Certificate](#)

Jun. 2023 - Sep. 2023

Junior Cybersecurity Analyst

Networking, Cyber Threats, Data analysis

- Designed and implemented security measures for micro services communication.
- Interfaced with a stock price data feed and setted up system for analysis of the data.

KIIT IOT LAB

Mar. 2023 - Jun. 2023

Privacy Preservation and Security Researcher

Privacy Preservation, Researching, Publication

- Developed a Chrome browser extension enhancing user privacy through advanced security features.
- Assessing proposed system changes, as part of configuration management process to determine impact to security designs.
- Ongoing research paper on Privacy Preservation with Vikas.

Deloitte Virtual Internship | [Certificate](#)

October. 2023

Cybersecurity

Vulnerability Assesment, Forensic, Phishing

- Participated in simulated scenarios to enhance incident response skills and crisis management in a virtual environment.
- Utilized industry-standard tools and technologies, such as [mention any specific tools or technologies used].

Canadian Virtual Cybersecurity Society

Mar. 2023 - Jun. 2023

Team Member

Vulnerability Assesment, TeamWork, Workshop

- Collaborate with other technical personnel to ensure mitigation of risks to the company.
- Participated in weekly forums, hackathons and meetups hosted in cybersecurity risk mitigation.

Projects

My Firewall-DIY | [Github](#)

Machine Learning Based Web Application Firewall

Python, Machine Learning, Web application Security

- Engineered a robust and adaptive system capable of identifying and mitigating emerging threats in real-time, ensuring optimal web application security.
- Integrated advanced machine learning models to analyze patterns, anomalies, and potential vulnerabilities within incoming web traffic, enhancing the accuracy of threat detection.
- Implemented user-friendly interfaces and reporting tools to facilitate monitoring and analysis of security events, providing actionable insights for cybersecurity teams.

GuardianSniff | Github

Privacy-Preserving Packet Sniffer for Secure Network Monitoring

Packet Sniffing, Privacy Preservation, Security

- Conducted thorough testing to validate the effectiveness of privacy preservation measures, ensuring minimal impact on network monitoring capabilities while upholding user privacy rights.
- Incorporated machine learning algorithms to detect anomalous patterns in network traffic without compromising individual user privacy, providing early indications of potential security threats.

MetaGuard | Github

Empowering File Metadata Management in a Microservices Architecture

Microservice, File Handling

- Conceptualized and developed "MetaGuard," a dynamic microservices-based file metadata management system designed for efficiency and scalability.
- Enhanced user privacy and security through robust authentication and authorization mechanisms, safeguarding sensitive file metadata.

KIIT-Threads | Github

Fostering Privacy-Preserving Conversations in the College Community.

TCP/IP, Server Connection, NodeJs

- Implemented end-to-end encryption to ensure that conversations within the app remain confidential and protected from unauthorized access.
- Conducted a comprehensive privacy assessment to identify and address potential vulnerabilities, ensuring the app complies with privacy regulations and standards.
- Designed a user-friendly interface that prioritizes privacy settings, allowing users to control the visibility of their posts and interactions within the college community.

PrivQR Librarian | Github

Enhancing Library Management with Privacy-Preserving QR Code Technology

Python, Google API, Microsoft Excel, Node

- Implemented a privacy-preserving approach by anonymizing user data within QR codes, minimizing the storage and transmission of personally identifiable information.
- Collaborated with library staff to implement features such as contactless check-in/check-out, enabling a seamless and privacy-conscious borrowing experience for users.
- Designed a user-friendly interface that allows library patrons to conveniently access library services and resources using secure QR codes without compromising their privacy.

PrivImage AI | Github

Crafting Images with Privacy-Preserving Intelligence.

OpenAi, Midjourney, Image Processing

- Developed "PrivImage AI," an innovative image generator that harnesses the power of artificial intelligence while prioritizing user privacy.
- Integrated advanced anonymization techniques to protect user identities within the image generation process, preventing unintended exposure of personal information.
- Actively monitored and updated PrivImage AI to address emerging privacy challenges and advancements in privacy-preserving technologies.

Publications

2022 Fourth Doctoral Symposium on Intelligence Enabled Research

December 2022

Cybersecurity Imminent Threats with Solutions in Higher Education | Certificate

- Presented a research paper titled "Cybersecurity Imminent Threats with Solutions in Higher Education" at the Fourth Doctoral Symposium on Intelligence Enabled Research.
- Collaborated with esteemed professors, Dr. Debajyoty Banik and Dr. Mahendra Kumar, on in-depth research to analyze and address imminent cybersecurity threats specific to higher education institutions.
- Emphasized the importance of intelligence-enabled research in staying ahead of evolving cybersecurity threats and presented strategies for proactive risk management in higher education environments.
- Contributed to the academic community by sharing research findings, methodologies, and practical solutions to enhance the cybersecurity posture of higher education institutions.

Skills

Programming Languages:

C/C++, Python, Javascript, Express, NodeJs, Dart, Java, Shell Scripting

Technologies & Tools:

Google's TensorFlow Privacy, Microsoft SEAL, Git, Linux, Docker,

Research Skills & Tools:

Research Paper Writing and Publication, Threat Intelligence Research, Malware Analysis, Vulnerability Assessment

Databases & Cybersecurity Tools:

Oracle, NoSQL(MongoDB), SQL, Query Optimization | Wireshark, Nessus, Metasploit, Nmap, Burp Suite

Certifications

Cybersecurity Roles, Tools & Operating System (IBM) | Certificate

Foundations of Cybersecurity (Google) | Certificate

Problem Solving- Intermediate (Hackerrank) | Certificate

ICDCIT 2023 Cyber Workshop | Certificate

Awards

Event- International Youth Math Competition

Award - Silver Honor | Certificate

Description:

Awarded Silver Honor in International Youth Math Competition, showcasing exceptional problem-solving skills and a strong aptitude for mathematics on a global scale. Demonstrated the ability to excel in a competitive environment and contributed to the promotion of mathematical excellence among youth.

Event - International Astronomy and AstroPhysics Competition(IAAC)

Award - Silver Honor |Certificate

Description:

Secured Silver Honor in International Astronomy and Astrophysics Competition, highlighting a profound understanding of celestial concepts and a keen interest in the exploration of the cosmos. Recognized for analytical thinking and dedication to advancing knowledge in the field of astronomy on an international platform