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
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

Portfolio Website | Github

Personal Portfolio Website *HTML, CSS, JavaScript*

- Created a personal portfolio website to showcase projects, skills, and experience.
- Implemented responsive design principles for optimal viewing across different devices.
- Utilized modern web technologies to create a visually appealing and user-friendly interface.

Blogging Website | Github

Personal Blogging Website *HTML, CSS, JavaScript, Node.js, Express.js*

- Developed a personal blogging website to share thoughts, ideas, and experiences.
- Implemented features such as user authentication, post creation, and commenting functionality.
- Utilized Node.js and Express.js for backend development, ensuring a robust and scalable architecture.

AGORA Video Chat App | Github

Real-time Video Chat Application *JavaScript, AGORA SDK, WebRTC*

- Developed a real-time video chat application utilizing AGORA SDK and WebRTC technology.
- Implemented features such as user authentication, peer-to-peer video calling, and real-time messaging.
- Ensured seamless communication and low-latency streaming for an enhanced user experience.

Stripe Payment Portal | Github

Payment Gateway Integration *JavaScript, Stripe API, HTML, CSS*

- Developed a payment portal integrating Stripe API for seamless online transactions.
- Implemented secure payment processing with tokenization and encryption techniques.
- Designed a user-friendly interface for customers to make payments securely and conveniently.

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