Aishwarya Madapati

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SUMMARY

- Hands-on internship experience in **Software Development and Cybersecurity**, with expertise **in data analysis, dashboards, Identity and Access Management (IAM), Privileged Access Management (PAM), Multi-Factor Authentication (MFA), Single Sign-On (SSO), Securing APIs**, **and exposure to AI applications in cybersecurity**, **Quantum-Safe Cryptography and Vulnerability management practices**, across cloud and on-premises environments.
- Experience collaborating with stakeholders to **analyze, visualize, and present data insights using Python and statistical methods.**
- Conducted design sessions with particular focus on **ForgeRock OpenAM, OpenDJ, OpenIG and OpenIdM.**
- Installation and Configuration **of Ping Federate.**
- Developed and configured **Kerberos** adapters to enable secure Single Sign-On (SSO) and token-based authentication.
- Hands - On experience in development/integration background in **ForgeRock OpenAM**
- Expertise in extending services using **OAuth2.0 based protocols** namely **OAuth2.0, OpenID Connect (OIDC), and UMA** to show how low level devices and mobile applications can request access to resources and how those resources can be shared with **third-party applications.**
- Experience with **IAM products from ForgeRock (OpenIDM, Open AM and OpenDJ) and building IAM solutions implementing OAuth2 and ODIC specifications.**
- Experience in developing **responsive websites using ReactJS**.
- Experience in developing **RESTful APIs** using **Flask (Python)** to ensure efficient data exchange.
- Experience using **Python, React, Redux, Flux, PostgreSQL, Git.**

TECHNICAL SKILLS

Programming Languages: Python, JavaScript, Java, Typescript
Operating Systems: Windows, Linux, MacOS
Backend Frameworks: Express JS
Data Analysis & Visualization: Pandas, NumPy, Microsoft Excel, Power BI, Tableau (basic)
IAM / PAM Tools: Microsoft Entra ID, Ping Federate, HTML Form Adapter, Kerberos
SSO and Identity: OIDC Connect, Okta
Security & Networking: OWASP, JWT, OAuth2, SAML, LDAP, Active Directory, Network Security
Compliance and standards: NIST, PCI DSS, HIPAA, SOX, FAA, GDPR, PII, ISO
Frameworks & Tools: ReactJS, Redux, Node.js, Wireshark, Nessus
Databases: PostgreSQL, MySQL
Web Services: REST API'S, Microservices, JSON, XML
Version Control & Collaboration: Git, Jira, Confluence

EXPERIENCE

Information Technology Intern
Illinois Department of Human Services | Chicago, IL, USA   June 2025 - July 2025

- Assisted in managing and maintaining Electronic Health Records using **EHR Systems** to ensure accuracy, completeness, and regulatory compliance, including **HIPAA.**
- Supported health data audits and quality checks to validate integrity and alignment with state and federal healthcare standards.
- Performed audits and analysis **of EHR data to validate accuracy, completeness, and compliance**, supporting **departmental data quality goals.**
- Collaborated with IT security and compliance teams to ensure **secure handling** and **controlled access to sensitive patient data.**
- Contributed to the development and enforcement of **cybersecurity protocols** for medical record retention, access logging, and secure data disposal in accordance with **HIPAA and NIST guidelines.**

Programmer Analyst Trainee
Cognizant Technology Services | Hyderabad, INDIA   Oct 2023 - Mar 2024

- Integrated **OIDC** with various applications and systems to **enable Single Sign-On (SSO) experiences for users** across the organization.
- Integrated **Ping Federate with multiple third-party identity providers**, such as **Active Directory, LDAP, and OAuth**, to establish a unified authentication framework.
- Integrated **Okta** with various cloud-based and on-premises applications, such as **Salesforce, LDAP, Office 365, and Active Directory, ensuring consistent access controls and identity federation.**
- Experience in managing applications access in **Ping and Active Directory**. Managing policies and platforms. Creating and assigning Safes, reconciling accounts, and rotating passwords.

LEADERSHIP EXPERIENCE

IEEE CIS CHAPTER CHAIR
IEEE GRIET CIS SBC | GRIET   May 2021 - May 2023

- Led a student chapter of **the IEEE Computational Intelligence Society (CIS)**, overseeing **chapter activities, events, and membership outreach.**
- Organized **technical talks, workshops, and networking events**, facilitating learning and collaboration among students.
- Led **the university's IEEE Computational Intelligence Society Chapter**, coordinating events, workshops, and initiatives for students.

PROFESSIONAL MEMBERSHIPS & COMPETITIONS

Data Analytics Cup
University Of Illinois at Springfield   April 2025

- Participated in the **Data Analytics Cup at University of Illinois Springfield,** as part of the *Data Kittens* team, achieving **3rd place overall.**
- Analyzed trends in R&D spending, advertising efficiency, and customer satisfaction across multiple industries using linear regression, R-squared analysis, and correlation analysis.
- Provided actionable recommendations for marketing strategies, customer engagement, and financial management based on data-driven insights.
- Developed a customer satisfaction index (CSI) model incorporating advertising-to-sales, R&D-to-sales, and liabilities-to-sales ratios.

Target Cyber Defense Challenge
Women in Cybersecurity   June 2025

- Participated in a global cybersecurity challenge simulating real-world attack and defense scenarios.
- Executed red team and blue team exercises, including vulnerability scanning, threat detection, and mitigation.
- Performed vulnerability scanning and system security monitoring using Nessus and Wireshark during Target Cyber Defense Challenge.
- Conducted incident response and analysis for simulated cyber-attacks on enterprise-level systems.
- Demonstrated security monitoring, log analysis, and risk assessment under high-pressure, time-constrained conditions.

Women in Cybersecurity (WiCyS) Membership   May 2025 - Present

- Actively engaged in professional development, networking, and technical workshops to advance cybersecurity knowledge and leadership.

PROJECTS

QR-Phish Guard + Voice Coach   October 2025
Tech Stack: Bolt.new, Runware, ElevenLabs , Next.js, Node.js, Python

- Designed and developed an **AI-driven QR-code security application** that detects, scores, and explains phishing risks in real time.

- Integrated **Runware Vision** to decode QR images and implemented a **custom risk-analysis engine** that validates URLs against trusted domains, flags IP-literals, punycode, shorteners, and risky TLDs (.zip, .mov).
- Added **ElevenLabs Voice Coach** to generate spoken feedback describing why a QR code may be unsafe, improving **accessibility** and promoting user awareness.
- Delivered a **color-coded interface** (Safe / Caution / Suspicious) that visually displays evidence chips and provides voice-based guidance for inclusive, real-time security education.
- Strengthened cybersecurity awareness by merging **AI Vision + Voice AI** to help students and staff recognize and avoid QR-based phishing attacks

Techstore – Web Application   **October 2023**

- Developed a **dynamic e-commerce React project** using **HTML, CSS, Bootstrap** for responsive design.
- Implemented the frontend functionality with **React**, leveraging the **Context API** for efficient state management.
- **Utilized React Router DOM** for seamless navigation and **integrated React Hook Form** for robust form handling, enhancing the user experience

Image Caption Generator Using Flickr_8k Dataset   **January 2023 – August 2023**

- Developed **an Image Caption Generator** using **Convolutional Neural Network (CNN)** and **Long Short-Term Memory (LSTM) architecture.**
- Trained the model on the **Flicker_8K dataset** to generate descriptive captions for input images.

Image Fusion of CT and MRI   **August 2022 – December 2022**

- Developed a medical image fusion model using **Dual Tree Complex Wavelet Transform (DTCWT)** to extract intricate information from **CT and MRI images.**
- The fusion performance is evaluated based on root mean square error **(RMSE)**

EDUCATION

Master of Science, Computer Science	Expected Graduation: December 2025
University of Illinois at Springfield | Springfield, IL	Aug 2024 to Present
Graduate Certificate in System Security	
University of Illinois at Springfield | Springfield, IL	Aug 2024 to Present
Bachelor of Technology, Information Technology	
Gokaraju Rangaraju Institute of Engineering & Technology| Hyderabad, India	March 2019 to August 2023

PUBLICATION

AIR QUALITY INDEX PREDICTION

Link: https://ui.adsabs.harvard.edu/link_gateway/2023E3SWC.39101103A/doi:10.1051/e3sconf/202339101103

- Compared Support Vector Machine (SVM) and Random Forest models to predict AQI based on air pollutants (SO2, NO2, PM10, PM2.5, CO) from India's Open Government Data Platform.
- Evaluated model performance using error metrics to enhance accuracy in forecasting air quality levels.

COURSES AND CERTIFICATIONS

- **Career Essentials in Cyber Security by Microsoft and LinkedIn.**
- **Generative AI APIs for Practical Applications: An Introduction – Skillsoft**
- **Engaged in Artificial Intelligence training at Oracle Academy.**
- **SQL Fluency – Udacity**
- **Introduction to Python Course – NPTEL.**
- **Programming, Data Structures and Algorithms – NPTEL**
- **Microsoft Azure - Udacity**
- **Participated in Machine Learning session at Cognizance IIT Roorkee.**