Antonio Karam

Driven and skilled computer engineering student interested in developing innovative solutions.
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EDUCATION

University of Notre Dame | Notre Dame, IN Expected May 2025
Bachelor of Science, Dean's List All Semesters, IEEE Eta Kappa Nu, Tau Beta Pi ***GPA: 3.9***
Major: Computer Engineering | Concentrations: Cyber Security, Artificial Intelligence

EXPERIENCE

Oracle | Redwood City, CA
Software & Security Engineering Intern May 2024 – Aug 2024
- Developed an encryption and signing utility in Java that automates the sending of 80 monthly emails.
- Conducted security research on 3 critical JNDI/LDAP injection, deserialization vulnerabilities and produced results that can be used to implement efficient, log-based YARA detection rules for exploits.
- Built proof-of-concepts and documentation for 6 different 0-day vulnerabilities in Oracle products.
- Implemented an AI chatbot that can answer questions about security policies using an LLM with RAG, hybrid search, and full UI and chat history using LangChain.

University of Notre Dame | Notre Dame, IN
Software Engineering Intern May 2023 – May 2024
- Developed a **full stack** web application using a **custom framework** that provides faculty and students, access to over 20 data storage and management technologies that can fit all needs and **information security** constraints.
- Upgraded 10 **Ruby** and **Rails** applications to ensure **software security** and created unit tests with documentation.
- Conducted **design thinking** interviews with 8 stakeholders to develop integrated student experience software.

OneAmerica Financial Partners | Indianapolis, IN
Software & Data Engineering Intern - AnalytiXIN May 2022 – Aug 2022
- Built a tool for analysts and brokers to identify characteristics that make insurance plans profitable in **Python**.
- Applied data processing techniques, machine learning, and visualizations to over 1,000,000 real-world data points with **ArcGIS**, **SVM** for **NLP**, preprocessing, **Pandas**, and **Tableau** while navigating **SQL** relational databases.

LEADERSHIP AND ACTIVITIES

Engineers Without Borders | Notre Dame, IN
Chapter President Sep 2021 – Present
- Spearhead design and brainstorm sessions with over 50 members to make go/no-go decisions on projects.
- Manage the chapter's resources, raising $15,000 in capital for implementation and assessment trips to Ecuador.

Student International Business Council | Seattle, WA - Chicago, IL
Microsoft Travel Team Jan 2023 – Apr 2023
- Explored opportunities within the embedded finance industry through in-depth market and technical analyses.
- Engineered a model Buy Now Pay Later interface within the Xbox store that increases buyer conversion by 65%.

RELATED COURSEWORK AND PROJECTS

Digital Integrated Circuits | University of Notre Dame
Chip Design Aug 2023 – August 2024
- Designed standard cells in 0.5u technology which met lambda design rules and passed DRC, LVS, and extraction tests using Cadence Virtuoso, Layout GXL, and Analog Place and Route.
- Proposed, designed, and tested an LFSR in Verilog and synthesized a winning design using the Google sponsored eFabless digital chipIgnite flow in GF180nm technology, passing Multi-Project Wafer and Tapeout tests.

TECHNICAL AND LANGUAGE SKILLS

Technical: C, C++, Python, Java, Git, Dart, Ruby, HTML, CSS, JavaScript, React, TypeScript, Next.js, Bootstrap, Tailwind, Firebase, Docker, AWS, SQL, MATLAB, Bash, Assembly, Verilog, Byteman, IDA Pro, OllyDbg, Tableau
Language: English – Near Native, Arabic – Native Speaker, French – Native Speaker