

Catherine Rodriquez

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Education

Louisiana State University | Baton Rouge, LA

Roger Hadfield Ogden Honors College

Bachelor of Science, Computer Science | Cybersecurity | Software Engineering | GPA: 3.91

May 2025

- Minor: Digital Media Arts and Engineering Technology
- Distinguished Communicator Candidate
- Distinguished Researcher Candidate

Technical Skills

- **Languages:** JavaScript, Java, C/C++, Python, C#, SQL, TypeScript
- **Frameworks:** React.js, Node.js, P5.js, Tone.js, Tailwind.css, Next.js, Flutter
- **Databases:** MySQL, Firebase
- **Software/Tools:** LaTeX, Microsoft Power Apps, Arduino, Figma, Azure
- **AI Tools:** ChatGPT API, RAG (Retrieval-Augmented Generation), LLMs (Large Language Models)

Experience

Software Engineering and Evolution Laboratory (SEEL)

August 2024 – Present

Lab Researcher | Louisiana State University

- Conducted research on Flutter, analyzing its performance, usability, and capabilities for mobile app development, contributing insights to the broader field of software engineering.

Our Lady of the Lake

August 2024 - December 2024

LLM Developer & Researcher | Baton Rouge, LA

- Developed ContraLake, an AI-powered tool using ChatGPT 4o API and RAG architecture to automate document processing and contract analysis.
- Integrated chat history and contextual retrieval, enabling faster review of payor contracts and significantly improving workflow efficiency.

Deloitte

June 2024 – August 2024

Cyber and Strategic Risk Intern | Houston, TX

- Partnered with AT&T to deploy multifactor authentication (MFA) solutions, significantly strengthening security protocols and safeguarding sensitive data.
- Led the analysis and evaluation of client security frameworks, pinpointing vulnerabilities and crafting comprehensive strategies to address and mitigate potential risks, strengthening the security posture.

Projects

Gratitude Journal | Personal Project

August 2024 - September 2024

- Developed a Daily Gratitude Journal web app using React, Tailwind CSS, and Next.js, integrating Firebase for real-time data and authentication, with Scrum for task management, and added dynamic animations with Framer Motion for a modern, responsive design.

Tiger Dorm Defender | Geaux Engineering

August 2024

- Designed a secure dormitory access control system using a full stack approach, utilizing React.js, Node.js, Tailwind.css, and MySQL, ensuring authentication of student residents through LSUID verification.

Leadership and Activities

- Web App Development | Secretary 2024-25
- Chevron Leadership Academy 2022-2025
- Geaux Engineering | Design Leader 2023-25
- TigerAI Boot Camp 2024
- Society of Peer Mentors (SPM) 2022-25
- eXploreCS Summer Camp | Mentor 2023-24

