NICOLE CINDY LUCAS

New York, NY • 347-285-9022 • nicoleclucas003@gmail.com • GitHub • Website • LinkedIn

EDUCATION

Washington University in St. Louis **May 2025**
Bachelor's of Science in Computer Science, Minor: Human-Computer Interaction
Relevant Coursework: Data Structures & Algorithms, Object-Oriented Software Development, Web Development

TECHNICAL SKILLS

Programming Languages: Python, Java, C++, C#, JavaScript, HTML, CSS, React, PHP, Swift, AVR Assembly
Tools & Platforms: Git, Docker, Unity, Figma, Netlify, AWS, Azure, SQL, MongoDB, PostgreSQL

RELEVANT EXPERIENCE

Equitech Futures - Applied Data Institute Scholar Aug 2025 - Dec 2025
• Built a data analytics web platform for monitoring Africa's water infrastructure using Python, Streamlit, Plotly, and PostgreSQL, enabling real-time visualization of production, billing, and compliance metrics.
• Implemented data ingestion and transformation pipelines to clean and aggregate multi-source water utility data, improving query performance and dashboard load times.
• Collaborated with domain experts to design data models that support large-scale decision-making for policymakers.

InvestSTL - Data Analyst & UX Researcher Jun 2023 – Aug 2023
• Developed a real-time mapping platform in Python and SQL to aggregate and display data for 50+ neighborhoods, supporting analytics for community investment decisions.
• Wrote reusable data cleaning and scripts that reduce manual processing leading to a 25% increase in platform adoption.
• Partnered with engineers and designers to translate 15+ UX findings into product changes, improving task completion rates and beta user satisfaction.

Washington University Robotics Team - Arm Team Member Dec 2022 – May 2023
• Developed and programmed a 4-DOF robotic arm with integrated computer vision, enabling autonomous object manipulation and precision control.
• Collaborated with the software team to implement machine learning algorithms, improving servo control accuracy and robotic performance by optimizing motion paths.

PROJECTS

[**WaySafe**](WaySafe) - *React, TypeScript, Python, Google Maps API*
• Built a full-stack navigation tool that computes and ranks routes using a composite score based on historical crime data and user-selected safety vs. speed preferences.
• Implemented a Python backend to query and aggregate crime data along candidate paths, applying weighted scoring algorithms to generate safety scores and explanations for each route.
• Developed an interactive React frontend with a comfort slider, map visualizations, and synchronized detail panels that update route highlights and safety insights in real time.

[**Spot that Tune**](Spot that Tune) - *Swift, Objective-C, SQLite, Spotify API, XCode*
• Implemented an iOS app that calls the Spotify Web API to fetch track metadata and generate dynamic music trivia questions and personalized recommendations.
• Designed and integrated a SQLite database layer to store user profiles, scores, and leaderboard rankings, optimizing queries for fast in-app retrieval.

LEADERSHIP EXPERIENCE

Society of Hispanic Professional Engineers - President | St. Louis, MO Jan 2023 – May 2025
• Revitalized the SHPE chapter, increasing membership by 200% (from 50 to 150 members) through strategic programming and mentorship initiatives.
• Secured funding for 5+ chapter events by collaborating with sponsors, enabling professional development opportunities for members.