

Alexander Merlo

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Education

University of Florida

Bachelor of Science in Computer Science, 3.75 GPA

Gainesville, FL

Graduated: May 2025

Relevant Coursework: Software Engineering, Data Structures and Algorithms, Algorithm Design, Computer and Information Security, Database Systems, Machine Learning, Human-Computer Interaction, and Operating Systems

Technical Skills

Languages: JavaScript, HTML, CSS, SQL, Python, C++

Stacks: MERN (MongoDB, Express, React, Node)

Technologies: Git/Github, Oracle SQL developer, VS Code, JetBrains, Various LLMs, APIs

Libraries: Tailwind, Jest, Pandas, Matplotlib, NumPy

Volunteer Experience

Clubfinity | Tech Officer

Oct 2024 – Present

Software Engineering Club @ UF

Gainesville, FL

- Implemented UI redesigned based on Figma prototypes from the UX/UI team, improving user experience for managing profiles, followed clubs, and social media links.
- Integrated full-stack futures, modifying database schemas and API routes to support new frontend futures.
- Completed a 4-week onboarding course in MERN and React Native development, gaining proficiency in full-stack development within a large multiplatform codebase aligned with the club's coding standards.

Projects

ANNCURA | Senior Project

Spring 2025

- Led a team of 5 developers to create the website and evaluation for a study being led by Dr. Michael Weiss at UF's level 4 NICU. The goal of this site was to get information regarding new techniques for handling newborns to rural hospitals and streamline communication between nurses and doctors regarding neurological conditions and interventions.
- Created a complex evaluation – Sarnat exam - using React. The results for this exam are verified with test cases via Jest, ensuring reliable results even as iterative logic modifications were being made.
- The projected impact includes preventing approximately 12 cases of severe IVH (bleeding in the brain) annually and reducing the incidence of cerebral palsy in 9 newborns each year in Florida alone! Additional benefits from the enhanced Sarnat exam are anticipated, but I don't have specific figures for this.

Food Genie | Human-Computer Interaction

Fall 2024

- Integrated the Spoonacular API with React to fetch over 5,000 recipes, 2,600 ingredients, and nutritional information. This gives users an intuitive UI for personalized recipe recommendations based on their dietary needs.
- Utilized knowledge of full-stack development from previous projects to create and deploy this application in under a week.

OnTask | Introduction to Software Engineering

Fall 2024

- Led a team of 4 developers to build a full-stack calendar application using MERN. Solidifying my skills in software collaboration and management by utilizing GitHub to merge 100+ team contributions.
- Created a CRUD API to manage our MongoDB database. This database allowed for user authentication, various account types (teacher or student), and custom calendar events with titles, content, and colors.

Weather Me This! | Information and Databases Systems

Spring 2024

- Collaborated with a team of 5 developers to build a full-stack app that uses over 2,000,000 tuples of data to display complex weather trends.
- I aggregated and preprocessed data using Python with Pandas. This allowed me to implement SQL queries using Oracle Developer to extract, filter, and analyze weather data, driving insights for graph visualizations.

Arduino Robot Arm | Personal Project

Fall 2024

- Learned Arduino (C++ variant) to connect servo motors with controllers for robotic arm movements.
- Gained hands-on experience with computer engineering concepts, including embedded programming, breadboard prototyping, and Arduino Uno integration.