

Carson Rivera

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EDUCATION

Florida State University

Tallahassee, FL

Bachelor of Science in Computer Science - Honors Program | GPA: 3.88/4.00

May 2027

EXPERIENCE

Software Engineer Intern

June 2026 – Present

Merck & Co.

Rahway, NJ

- Developed a Python and FastAPI backend service for a RAG agent application, implementing automated error routing to application owners to support reliable delivery of critical SOP insights across R&D.
- Built and maintained automated backend test coverage using Pytest and implemented React component tests with Vitest to improve application reliability and reduce deployment risks.
- Collaborated within an Agile development team, contributing to sprint planning, story refinement, Kanban workflows, and cross-functional discussions to deliver application enhancements.
- Supported development and troubleshooting of an AWS-hosted application by validating backend behavior across local, development, and production Lambda environments, analyzing CloudWatch logs, and working with DynamoDB-backed services to debug issues.
- Partnered with R&D IT application owners to encourage adoption of cost-effective cloud practices and FinOps principles for hosted applications.

Research Assistant

Sept. 2024 – Apr. 2026

Florida State University

Tallahassee, FL

- Co-authored a multi-agent LLM system for longitudinal behavioral health coaching, accepted for publication at the IEEE/ACM CHASE 2026 conference (21% acceptance rate).
- Designed a Python and vLLM backend that separated dialogue generation, state tracking, and response steering, enabling persistent cross-session memory and reducing redundant interactions by 55%.

Software Engineer Intern

June 2025 – Aug. 2025

Merck & Co.

Rahway, NJ

- Designed and developed a Microsoft Power Platform application using Power Apps and Power Automate to replace manual audit planning processes, improving collaboration and operational efficiency.
- Integrated Microsoft Graph API services to automate email and calendar notifications, reducing manual coordination overhead and improving adherence to audit milestones and deadlines.
- Built automated test coverage with Power Apps Test Studio and created technical documentation to support application reliability, maintainability, and team knowledge transfer.

PROJECTS

Running Safer | runningsafer.com | *Next.js, React, TypeScript, Tailwind CSS, FastAPI, Python, PostgreSQL*

- Built a full-stack web application featuring a responsive Next.js interface and Strava OAuth to securely authenticate users, import activity history, and render interactive route maps.
- Developed a FastAPI backend that decodes activity polylines, queries OpenStreetMap Overpass data, and processes pedestrian safety metrics like sidewalk availability to score individual street segments.

Thread Count | threadcountcarson.com | *Blazor Server, Blazorise, .NET 8 (C#), SQLite*

- Built and deployed a full-stack wardrobe management web app in .NET using Blazor Server, ASP.NET Core Identity, and Entity Framework Core to deliver a secure, user-friendly experience for organizing clothing items.

LEADERSHIP/INVOLVEMENT

Theta Tau Professional Engineering Fraternity | *Web Chair, FSU Liaison, Risk Chair*

Apr. 2024 – Present

Association for Computing Machinery | *Historian*

Aug. 2024 – Apr. 2025

TECHNICAL SKILLS

Languages: C++, Python, C#, JavaScript, TypeScript, Bash, HTML, CSS

Frameworks/Libraries: React, Next.js, .NET, Blazor, FastAPI

Cloud/Databases: AWS Lambda, AWS CloudWatch, Amazon DynamoDB, PostgreSQL

Developer Tools: Git, GitHub, Visual Studio Code, Bruno, Postman, Jira