

Cole Morgan

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EDUCATION

University of Florida

Bachelor of Science in Computer Science, GPA: 3.85

Gainesville, Florida

Aug. 2023 – April 2027

EXPERIENCE

Fullstack Software Engineer Intern

June 2025 – Present

Satlantis

Gainesville, FL

- Built a high-performance web-based spectral imagery viewer leveraging React, WebGL, and Cloud Optimized GeoTIFFs with lazy loading from AWS S3, decreasing page loading times by 10x and enabling users to efficiently visualize satellite datasets.
- Developed a full-stack solution to zip and stream satellite imagery files (TIFF) from S3 through FastAPI backend to React frontend, implementing block-based processing to reduce server memory usage.
- Conducted comprehensive user research to identify pain points in the existing data retrieval platform, then collaborated with executive stakeholders to design and enhance the data hub platform in Figma, ensuring compliance with STAC (SpatioTemporal Asset Catalog) specification standards.

Peer Tutor, CISE Department

May 2025 – June 2025

University of Florida

Gainesville, FL

- Managed a 20-hour weekly tutoring schedule, providing one-on-one and small-group support in discrete mathematics, data structures and algorithms, programming fundamentals, and software engineering.
- Collaborated with CISE faculty to align tutoring sessions with course objectives, maintained detailed progress reports, and gathered feedback to continually refine instructional materials.

Software Engineer, Capital One Partnership Program

September 2024 – April 2025

University of Florida

Gainesville, FL

- Developed a Next.js, React, and TypeScript website for the Society of PC Building, serving 1,000+ club members with Firebase integration and a custom admin panel for real-time content management.
- Partnered with Capital One in an Agile Scrum development program under senior engineer mentorship, presenting deliverables to company leadership and securing a published feature story on their official website.
- Worked with UX/UI design team to implement Figma mockups as responsive components, while designing custom interface elements and feature specifications in Figma.

PROJECTS

AI Wildfire Monitoring Web App | *React, Typescript, Python, MongoDB, FastAPI*

January 2025

- Worked as the frontend engineer on a real-time wildfire monitoring system that allows users to connect their own CCTV cameras using WebSockets.
- Created an alert system that calls users using Twilio if smoke or fire is detected on their camera.

Coding Question Platform | *React, Docker, Firebase, JavaScript, Tailwind*

April 2024

- Developed a coding question platform using React and Tailwind, providing an interactive and user-friendly interface.
- Implemented user authentication and progress tracking with Firebase, securely storing data in Firestore.
- Deployed a containerized code execution engine using Docker, enabling safe and efficient code grading and execution.

TECHNICAL SKILLS

Languages: TypeScript, JavaScript, SQL (Postgres), NoSQL (MongoDB), Python, C++, HTML/CSS,

Frameworks: React, Next.js Node.js, Tailwind, Express.js, Flask, FastAPI

Tools: Git, Firebase, Docker, Google Cloud Platform, VS Code, Figma

AWARDS/ACHIEVEMENTS

Medihacks Hackathon Winner: Achieved 3rd place out of 53 submissions in a competitive week-long event.

Nurturing Gator Unity and Synergy Hackathon Winner: Secured 3rd place among 25 submissions at a university-sponsored hackathon.

KatyYouthHacks Hackathon Winner: Placed 3rd out of 46 submissions as a solo participant.