

# Kai Sprunger

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## EDUCATION

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**University of Central Florida, Burnett Honors College**

Orlando, FL

*Bachelor of Science in Computer Science, GPA: 3.9*

*Expected Graduation: 2028*

## EXPERIENCE

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**Systems Software Intern (GPU Software Resource Management Team)**

May 2025 – Aug. 2025

*NVIDIA*

*Santa Clara, California*

- Increased the code coverage from **77.7% to 97.1%** for a **RISC-V OS** library critical to dGPU and Tegra.
- Made tests simulating microkernel processes to validate edge cases and prevent regressions across **230 functions**.
- Revealed **8 critical bugs** on inter-process communication and thread local storage, implementing solutions for **4**.

**Software Chair**

April 2025 – Present

*Institute of Electrical and Electronics Engineers at the University of Central Florida*

*Orlando, FL*

- Developed new club website using the **MERN stack**, featuring real-time data analytics, club information, and relevant projects/events to **enhance user engagement by 25% and increase annual visitors to 2,500**.
- Implementing **CRUD** operations and regular updates for a resume database **storing 50+ user resumes**.
- Building a Discord bot in **JavaScript** to streamline task management for **400+ club members**.
- Made e-portfolio website template using **JavaScript and HTML/CSS**, resulting in **30+ clones on GitHub**.

**Hackathon Organizer**

Dec. 2024 – Present

*Knight Hacks at the University of Central Florida*

*Orlando, FL*

- Co-leading the organization of Knight Hacks' 8th annual hackathon, accommodating **1000+ attendees**.
- Collaborating on the development of the event itinerary for **50+ events**, ensuring alignment with goals.
- Co-leading **30+ volunteers**, enhancing execution of task delegation and event performance by **20%**.

## PROJECTS

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**Tariffix (Bitcamp 2025 Winner)** | *MongoDB, Cheerio, Gemini, React.js, Tailwind CSS, Next.js, Vite* April 2025

- Hackathon winner** of MLH Best Use of MongoDB Atlas.
- Chrome extension and website highlighting tariff-affected pricing on Amazon and facilitating HTS code lookups.
- Deployed a **tariff rate API on MongoDB Atlas** and developed **REST API routes with Express.js and Mongoose** to ensure efficient and scalable data retrieval.
- Utilized **React.js and Tailwind CSS** to display database data in **JSON format** and integrated **Gemini LLM API** to provide comprehensible analysis of findings.

**kmodo (Project Launch 2025 Winner)** | *React.js, Tailwind CSS, PostgreSQL, Drizzle, tRPC, Coolify* April 2025

- First place winner** for 3-month-long Knight Hacks Project Launch Spring Competition.
- Platform enabling users to organize hackathons, apply to events, connect with companies, and access resources.
- Developed key pages (landing, events, resources) and reusable components (navbar, footer, sponsor dashboard) using **React.js and Tailwind CSS**.
- Built a custom event search system with tag-based filters and keyword search using **Drizzle ORM and tRPC** to query event data from a **PostgreSQL database**.

**SprintScout (Knighthacks 2024 Winner)** | *React.js, Tailwind CSS, OpenCV, MongoDB, Whisper* Oct. 2024

- Hackathon winner** for ServiceNow Accelerator Recommendation Engine and MLH Best Use of MongoDB Atlas.
- AI-powered, features a vector search accelerator recommendation engine and transcription-to-visuals tool.
- Developed the frontend through **React.js and Tailwind CSS**, delivering a dynamic and responsive user interface featuring user form submissions and a visually engaging grid display.
- Designed a harmonious **UI/UX with Figma and Canva**, effectively bridging contrasting functionalities.

## TECHNICAL SKILLS

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**Languages:** JavaScript, TypeScript, Java, Python, C, C++, C#, SQL, HTML/CSS

**Dev Tools:** Visual Studio Code, GitHub, Perforce, Xcode, Vercel, Figma, Docker, Jira, Unity, Jupyter Notebook

**Libraries/Frameworks:** React.js, Tailwind CSS, PostgreSQL, MongoDB, Express.js, Node.js, Next.js, Vite, Gemini API, tRPC, Drizzle, OpenCV, Pandas, PyTorch, NumPy, Matplotlib, sklearn