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Jonathan Hopkins

Atlanta, GA
https://jiyaski.github.io

Education

Georgia Institute of Technology	**Bachelor of Science in Computer Science**	Jan. 2023 – May 2025
Atlanta, GA		GPA: 3.71
University of North Georgia	**Bachelor of Science in Physics**	Aug. 2020 – Dec. 2022
Dahlonega, GA	*(left incomplete)*	GPA: 4.00

Skills

- **Languages & Frameworks:** JavaScript/TypeScript, Python, C/C++, Java, React, Vue.js, Django
- **Tools & Libraries:** AWS, MySQL, Neo4j, MongoDB, NumPy, MatPlotLib, Git/GitHub, Figma, Jira
- **Other skills:** Agile, Project Management, Mobile Development, Web Security, Databases & Data Analytics

Projects

Dry Weight Watchers | *React Native, Django, MySQL, AWS* — Aug. 2024 – Apr. 2025

- Cross-platform mobile app and web system to connect Congestive Heart Failure patients with their healthcare providers, allowing timely monitoring of symptoms to potentially save lives.
- Collaborated with a client at Emory University to understand users and fulfill legal and security requirements.
- Implemented authorization for different roles, connecting and managing accounts, a dashboard for healthcare providers, Bluetooth integration with a smart scale, and managed database design and deployment.

Papergraph | *Neo4j, React, Express.js, D3.js* — Mar – Apr. 2025

- Created a graph search and visualization tool to help researchers find academic papers.
- Implemented a mostly-automated ETL pipeline to consume huge volumes of paper metadata, then improving throughput by $\sim$100x via indexing and batching.

FireSim | *NumPy, MatPlotLib* — Sept – Dec. 2024

- Constructed sophisticated mathematical models to predict the spread of wildfires in various environmental conditions, validated against empirical measurements and physical principles.
- Implemented in Python, with optimizations to speed up computation by 10-100x while maintaining fidelity.

Dun Dun Dungeon! | *Android, Java* — Aug – Dec. 2023

- Led development of a fun dungeon crawler RPG game for Android.
- Spearheaded implementation of tile-based level maps, UI rendering, and a custom parser for game assets, also contributing to other key features, unit testing with JUnit, and documentation.
- Served as Agile project manager, conducting sprint planning, task breakdowns, and code reviews.

GT Club Explorer | *React / Next.js, MongoDB, Figma* — Aug – Dec. 2023

- Developed Figma prototypes and front-end features for a site to help students find campus organizations.

Polymer Simulation Analysis | *Keras, Scikit-Learn, NumPy, MatPlotLib* — May – Dec. 2022

- Applied ML techniques to identify phase transitions of simulated magnetic polymers.

Experience

Learning Assistant — *University of North Georgia* — Aug. 2021 – Dec. 2022

- Helped teach eight sections of the introductory physics lab course, including giving lectures, setting up equipment, addressing student difficulties, grading assignments, and administering exams.
- Noticed students were struggling with Excel and took initiative to make a series of video tutorials, which have helped hundreds of students and are still used many semesters after my departure.
- Led training sessions over lab procedures for new learning assistants and faculty.
- Conducted data analysis on assignment feedback and grades to inform our teaching practices. Presented findings at a conference of the American Association of Physics Teachers' local chapter.