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Jonathan Hopkins

Atlanta, GA
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Education

Georgia Institute of Technology Jan. 2023 – (May 2025)
- B.S. in Computer Science GPA: 3.88
- concentrations in Modeling/Simulation and Networking/Databases

University of North Georgia Aug. 2020 – Dec. 2022
- B.S. in Physics (left incomplete) GPA: 4.0

Skills

- **Languages:** Java, C, Python, JavaScript, SQL
- **Frameworks:** React, MongoDB, ChakraUI, Node.js, Next.js
- **Other Tools:** Git/GitHub, Figma, Android, PyTorch, Scikit-Learn, NumPy, MatPlotLib

Projects

2D RPG Game – *Android SDK, Java, Git/GitHub, Trello* Aug. – Dec. 2023
- Collaborated with a team of five to develop a dungeon crawler RPG game for Android.
- Defined tasks, managed the GitHub repository, conducted code reviews, and produced documentation.
- Spearheaded implementation of tilemaps, UI rendering, and a custom JSON parser for game assets, also contributing to other features.
- Adhered to MVVM architecture to cleanly separate UI from business logic and employed best practices and design patterns for object-oriented software development.

University Club Explorer Website – *React/Next.js, MongoDB, ChakraUI, Figma* Aug. 2023 – Present
- Contributed to an effort to replace Georgia Tech's existing club/organization discovery site, aimed at improving searchability and user experience for students looking to get involved on campus.
- Drafted designs using Figma and implemented them in the site for a pleasing and smooth front-end.
- Implemented scrolling pagination and search/ranking functionality to help students easily find relevant clubs.

Time-Series Forecasting LSTM – *PyTorch, RescueTime API* June - July 2023
- Trained long-short-term memory networks (LSTMs) on four years of my own computer usage data from a popular productivity tool to understand and predict patterns in my productivity.

Circuit Simulator – *Python, NumPy, MatPlotLib* Sept. – Nov. 2022
- Developed a simulator which could solve any circuit consisting of ideal elementary circuit components.

Machine Learning Research – *Keras, Scikit-Learn, NumPy, MatPlotLib* May – Dec. 2022
- Used dimensionality reduction and neural networks to identify the phase transitions of simulated 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 after several semesters.
- Led training sessions over lab procedures for new learning assistants and professors.
- 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.