BRANDON DAVIDSON

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Education

Georgia Institute of Technology *Atlanta, Georgia* **05/2026**

- Bachelor of Science in Computer Science, GPA: 3.9
- Threads in Intelligence and Media

Relevant Coursework

- Object Oriented Programming, Data Structures and Algorithms, Design and Analysis of Algorithms, Objects and Design, Intro to Artificial Intelligence, Linear Algebra, Multivariable Calculus, Integral Calculus

Skills

- Python, Java, JavaScript, SQL
- React, Django, Node, Express
- Git, AWS, MongoDB
- Machine Learning, Full-Stack Development, Unit Testing

Experience

Software Developer **GROWER (Grid Resilience & Response)** *Atlanta, Georgia* **12/2024 - Present**

- Developed a web-based dashboard using **Python**, **Django**, and data visualization libraries for real-time power outage insights.
- Created interactive features for public communication, ensuring accessibility and usability with modern web technologies.
- Used **Pandas** and **Matplotlib** to analyze and visualize outage data, integrating insights into the dashboard.
- Collaborated with a team to integrate diverse data sources for comprehensive outage monitoring across regions.

Undergraduate Researcher **GROWER (Grid Resilience & Response)** *Atlanta, Georgia* **08/2024 - 12/2024**

- Developed reliability mapping models using **Python** and machine learning for a real-time nationwide power outage system.
- Designed interactive dashboards with **Matplotlib, Seaborn,** and **Pandas** to share key insights for emergency response teams.
- Collaborated with a team to integrate data and analyze the societal impacts of energy infrastructure disruptions.

Projects

Chrome Dino AI **05/2024**

- Implemented a reinforcement learning environment using **OpenAI Gym** to simulate the Chrome Dino game.
- Trained the agent with **Stable Baselines 3** and optimized hyperparameters using **Optuna**.
- Achieved a high score of 500+ by integrating a reward system and effective training constraints.

Spend Sense **08/2023**

- Built a personal budgeting app with **React** for the front-end and **Express.js** for the back-end.
- Implemented **MongoDB** for data storage and dynamic charts for spending insights.
- Deployed the app to the cloud for secure access and seamless financial tracking.

Cardinal System **01/2025**

- Built a Discord chat bot using **discord.py**, engaging 100 users daily with interactive commands for randomization and user engagement.
- Implemented admin tools for purging messages and managing server content.
- Created a leaderboard feature to track and display users' voice activity.

Check-In System **07/2023**

- Developed a check-in system with **Django**, HTML, and CSS for high school attendance
- Used barcode scanning via Ipads to streamline and automate the check-in process.
- Designed an intuitive interface to reduce wait times and enhance user experience.

Awards

Dean's List *Georgia Institute of Technology* **12/2024**