Brennan Davenport

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Education

University of Georgia GPA 3.76/4.00

Bachelor of Science in Computer Science, Minor in Mathematics *Graduate Date: May 2026*

Technical Skills

Languages: Java, Python, JavaScript, C, Swift, HTML/CSS, SQL (PostgreSQL), C++
Frameworks: Vue.js, Django, React.js, SwiftUI, SpringBoot, JUnit, Node.js, Core Location
Developer Tools: Vim, Git, GitHub, Unix/Linux, App Scripts, VS Code, Eclipse, Figma, Xcode
Relevant Coursework: Data Structures, Algorithms, Systems Programming, Discrete Math, Applied Linear Algebra

Experience

Contract Software Engineer June 2024 – September 2024

Category Creations, LLC. *Athens, GA*

- Developed a **scalable routing solution** by implementing the **Traveling Salesman Problem (TSP)** using **Google Apps Script**, with **Google Sheets** serving as a lightweight database for the user interface.
- Enhanced **route optimization** by researching and integrating **K-nearest neighbor algorithms** along with **two-opt** and **three-opt post-processing techniques** to improve routing efficiency.
- Leveraged **Google APIs** for data processing by utilizing the **Google Geo Code API** to convert addresses into latitude and longitude coordinates, and the **Google Directions API** to calculate and store point-to-point distances directly within **Google Sheets**.
- Supported business growth by creating a **cost-effective** and **easy-to-use routing software** that facilitated the company's expansion to **over 300 stores**, contributing to **over $1 million in sales**.

Projects

CalTrack | *Swift, Python, Django, PostgreSQL, Tensorflow, Git* March 2024 – Present

- **Led a team of 3** computer science students in developing a **mobile iOS application** that utilizes **artificial intelligence** and **image detection** to identify food items from photos.
- Implemented **real-time image processing** to provide instant feedback on food identification based on the model's prediction, improving user experience.
- Implemented **TensorFlow** to build and train an AI model with a dataset from **Hugging Face**, featuring over **100,000 food images**.
- Designed the backend using **Django** and **PostgreSQL** to manage user data and interactions efficiently.
- Overcame challenges in **image detection** by incorporating a classical approach, such as providing a dropdown menu for users to manually select toppings when recognizing items like burgers.

Indecisive | *Swift, SwiftUI, Python, Django, PostgreSQL* May 2024 – Present

- Developed an **iOS app** using **Swift** and **SwiftUI** that helps **indecisive users** find local restaurants, enhancing their dining experience through a user-friendly interface and engaging graphics.
- Integrated **Core Location** and the **Yelp API** to gather user data and dynamically suggest nearby restaurants based on individual preferences and location.
- Designed and implemented a **premium feature** that allows users unlimited spins for restaurant recommendations, thereby providing a **revenue stream** through **in-app purchases**.

Tradovate Autotrader | *Node.js, WebSocket API, Git* November 2022 – July 2023

- Developed an **autotrader application** using **Node.js** and **Tradovate's WebSocket API** for real-time market data, trading **Future Contracts** on **ESZ2**, **ESH3**, and **ESM3**.
- Created **custom trading algorithms** that analyzed market trends and executed trades based on predefined proprietary strategies.
- Interviewed, hired, and led a **software developer**, collaborating throughout the project to enhance features, optimize performance, and bring the prototype from **concept to completion**.
- Successfully raised **$5,000** in funding from local investors to support the project.