

Carter Tierney

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EDUCATION

Georgia State University *M.S. Computer Science (Current) GPA 3.76 || B.S. Computer Science* **Expected Spring 27**
Honors/Leadership: VP Outreach [progsu](#), President Barbell Club, Hackathon Winner
Relevant Courses: Sof Dev/Eng, ML, Algorithms/Data Structures, Database Systems, Data Science, Web/Mobile Dev

EXPERIENCE

Graduate Teaching Assistant *Georgia State University* **Jan 2026 - Present**

- Leading lab instruction and grading for **90+** students, providing **technical support** in assembly language, Linux/Unix systems, memory hierarchy, and processor architecture.

Freelance Developer *Paulk Clinic Website* **Aug 2025 - Dec 2025**

- Architected the owner's requirements in **agile** sprints, following **SDLC** to redesign a **legacy** clinic website
- Redesigned outdated page layouts and contact workflows using **PHP//CSS** and **UX** patterns, delivered a **15x** increase in contact conversions
- Optimized **UI/UX design** using PHP/CSS to modernize styles, resulting in a **6x** increase in user engagement

Software Engineering Intern *Alpha Web Advisors* **Oct 2024 - Aug 2025**

- Built full-stack platforms enabling HOA management, rent payments, maintenance tracking, and resident feedback using **TypeScript, React, Node.js, Express**, and **PostgreSQL** to provide access to **1300+** users
- Deployed web-app using **Vercel, Render, and Supabase** for secure auth, data storage, and reliable uptime
- Visualized property data using Power BI within Agile sprints, replacing Excel workflows with automation

Technical Operations Intern *Ardent Residential* **May 2023 - Aug 2023**

- Migrated management platforms using **Python** scripts, ensuring data accuracy and operations for 300+ HOA's
- Standardized property records across new systems using **SQL**, improving data consistency and platform usability
- Verified end-to-end data integrity with tech support; ensured 100% access for homeowners and board members

TECHNICAL SKILLS

Languages: Python, Java, TypeScript/JavaScript, SQL, PHP/HTML/CSS

Frameworks: ReactJS, NodeJS, FastAPI, Flutter, PyTorch, Scikit-Learn, TensorFlow, XGBoost

Tools & Infrastructure: REST APIs, GCS, Docker, Agile/Scrum, Git/Bash, CI/CD, SDLC, PostgreSQL, NoSQL

PROJECTS

VoiceVitals: 1st Emory Hacks | *TypeScript/React, ML/DL, GCS/Firebase* | [Devpost Link](#) **Nov 2025**

- Built FastAPI + PyTorch ML pipelines to analyze voice audio features, classifying audio clips for **dementia detection**
- Optimized feature extraction using analytics and **ensemble models** to raise predictive performance and robustness
- Deployed a **scalable** doctor/patient dashboard with data visualization and secure audio storage for clinical trials
- Engineered 153 features using spectral, prosodic, and voice quality analysis to improve model sensitivity and precision

Weightlifting Total Prediction | *Python, XGBoost, Jupyter Notebook, EDA, Open-PL* | [PL ML Predict](#) **Nov 2025**

- Competitive weightlifting predictions using 3 XGBoost models for next max Squat/Bench/Deadlift
- Cleaned records using **Pandas**, engineering features for time, progression, and context for accurate prediction

Fraud E-Commerce Analytics Pipeline | *Kafka/Spark, PostgreSQL, Docker, Plotly, ML* | [Github Link](#) **Oct 2025**

- Designed e-commerce pipeline handling 12.5k tx/min//<1s latency using Kafka, Spark, PostgreSQL, and Docker
- Implemented Isolation Forests for ML fraud detection with 95%+ accuracy in streaming production data
- Containerized using Docker Compose, production tested with real-time monitoring/automated data quality checks