

# Carter Tierney

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## EDUCATION

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**Georgia State University** *M.S. Computer Science (Current) GPA 3.76 || B.S. Computer Science*      **Expected Spring 27**

**Honors/Leadership:** President of Barbell Club, Hackathon Winner, Graduate Assistantship Recipient

**Relevant Courses:** Sof Dev/Eng, ML, Algorithms/Data Structures, Database Systems, Data Science, Web/Mobile Dev

## EXPERIENCE

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

- Assisting lectures on Comp Org/Architecture, using problem-solving and supplemental instruction to assist students
- Mentoring students from diverse backgrounds, helping reduce barriers to success in technical coursework

**Full-Stack Developer** *Paulk Clinic Website*      **Aug 2025 - Dec 2025**

- Worked directly with the clinic owner on a freelance contract to redesign an outdated legacy website frontend/backend, achieving a **6x** increase in homepage views.
- Redesigned page layouts using PHP//CSS, followed client requirements, and delivered a **15x** increase in website conversions
- Redesigned contact workflows using custom forms and UX patterns, achieving a **3.5x** increase in contact page views
- 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**

- Architected HOA dashboard/residential portal websites using React/TypeScript, providing access to 1300+ users
- Visualized insights using PowerBI within Agile sprints, replacing Excel workflows with automation
- Deployed deployment pipelines using AWS Amplify, maintaining 99.9% uptime for 12 communities

**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 post-migration through proper testing, ensuring 100% reliable access for homeowners and board members

## TECHNICAL SKILLS

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

**Frameworks:** ReactJS, Pandas, NumPy, NodeJS, FastAPI, PyTorch, Scikit-Learn, TensorFlow

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

## PROJECTS

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**VoiceVitals: Dementia Detection, 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 early dementia detection
- Optimized feature extraction using advanced 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 data collection
- Engineered 153 features using spectral, prosodic, and voice quality analysis to improve model sensitivity and precision

**Paulk Clinic Website (Client Product)** | *PHP/CSS/HTML, Deployment/Config, SEO* | [thepaulkclinic.com](#)      **Nov 2025**

- Implemented a full-stack website redesign using PHP/HTML/CSS, delivering client requirements
- Engineered custom form-handling and validation logic in PHP to manage user submissions and improve UX flow
- Optimized backend performance by refactoring PHP queries and reducing bottlenecks, cutting page load times by 50%

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

- Built a real-time 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
- Fully containerized using Docker Compose, production tested with real-time monitoring/automated data quality checks