

# Carter Tierney

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## EDUCATION

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<b>Georgia State University</b> <i>M.S. Computer Science (Current)</i> GPA 3.76    <i>B.S. Computer Science</i>	<b>Expected Spring 27</b>
<b>Honors/Leadership:</b> VP Outreach <a href="#">progsu</a> , President Barbell Club, Hackathon Winner	
<b>Relevant Courses:</b> Sof Dev/Eng, ML, Algorithms/Data Structures, Database Systems, Data Science, Web/Mobile Dev	

## EXPERIENCE

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<b>Graduate Teaching Assistant</b> <i>Georgia State University</i>	<b>Jan 2026 - Present</b>
• Leading lab instruction and grading for <b>90+</b> students, providing <b>technical support</b> in assembly language, Linux/Unix systems, memory hierarchy, and processor architecture.	
<b>Freelance Developer</b> <i>Paulk Clinic Website</i>	<b>Aug 2025 - Dec 2025</b>
• Architected the owner's requirements in <b>agile</b> sprints, following <b>SDLC</b> to redesign a <b>legacy</b> clinic website	
• Redesigned outdated page layouts and contact workflows using <b>PHP//CSS</b> and <b>UX</b> patterns, delivered a <b>15x</b> increase in contact conversions	
• Optimized <b>UI/UX design</b> using PHP/CSS to modernize styles, resulting in a <b>6x</b> increase in user engagement	
<b>Software Engineering Intern</b> <i>Alpha Web Advisors</i>	<b>Oct 2024 - Aug 2025</b>
• Built full-stack platforms enabling HOA management, rent payments, maintenance tracking, and resident feedback using <b>TypeScript, React, Node.js, Express</b> , and <b>PostgreSQL</b> to provide access to <b>1300+ users</b>	
• Deployed web-app using <b>Vercel, Render, and Supabase</b> for secure auth, data storage, and reliable uptime	
• Visualized property data using Power BI within Agile sprints, replacing Excel workflows with automation	
<b>Technical Operations Intern</b> <i>Ardent Residential</i>	<b>May 2023 - Aug 2023</b>
• Migrated management platforms using <b>Python</b> scripts, ensuring data accuracy and operations for 300+ HOA's	
• Standardized property records across new systems using <b>SQL</b> , 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

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**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

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<b>VoiceVitals: 1st Emory Hacks</b>   <i>TypeScript/React, ML/DL, GCS/Firebase</i>   <a href="#">Devpost Link</a>	<b>Nov 2025</b>
• Built FastAPI + PyTorch ML pipelines to analyze voice audio features, classifying audio clips for <b>dementia detection</b>	
• Optimized feature extraction using analytics and <b>ensemble models</b> to raise predictive performance and robustness	
• Deployed a <b>scalable</b> 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	
<b>Weightlifting Total Prediction</b>   <i>Python, XGBoost, Jupyter Notebook, EDA, Open-PL</i>   <a href="#">PL ML Predict</a>	<b>Nov 2025</b>
• Competitive weightlifting predictions using 3 XGBoost models for next max Squat/Bench/Deadlift	
• Cleaned records using <b>Pandas</b> , engineering features for time, progression, and context for accurate prediction	
<b>Fraud E-Commerce Analytics Pipeline</b>   <i>Kafka/Spark, PostgreSQL, Docker, Plotly, ML</i>   <a href="#">Github Link</a>	<b>Oct 2025</b>
• 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	