

# Carter Tierney

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## EDUCATION

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### Georgia State University B.S. / M.S. in CS with Privacy/Security GPA 3.76

Expected Spring 27

**Honors/Leadership:** President of Barbell Club, Hackathon Winner, Graduate Assistantship (Top 15% of applicants)

**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

Dec 2025 - Present

- Assisting lectures on Comp Org/Architecture, using problem-solving and supplemental instruction to assist students
- Researching under professors within a student community, applying time management//technical research ability
- Mentored students from diverse backgrounds, helping reduce barriers to success in technical coursework.

### Full-Stack Developer Paulk Clinic <https://www.thepaulkclinic.com/>

Aug 2025 - Present

- Designed website frontend using PHP/CSS, achieving **25%** surge in patient engagement//**25%** reduction in bounce rate
- Optimized backend with WordPress plugins, boosting performance by **60%** and cutting page load time from **4.2s to 1.7s**
- Highlighting trends and patterns using Google Analytics to support decision-making
- Maintaining HIPAA compliance and clean code through SDLC practices in a heavily regulated industry.

### Software Engineer Intern Alpha Web Advisors

Oct 2024 - Aug 2025

- Cleaned and validated data using Apache **Spark** to perform a large-scale migration of **20K+** real-estate records
- Migrated **500+** property records to PostgreSQL using AWS S3//Glue, achieving **zero data loss**
- Optimized SQL queries, boosting data accuracy from **92% to 99.8%** and cutting query time **18x** (3.2s → 180ms)
- Architected web apps using React//TypeScript, providing homeowner residential portals//HOA dashboard boards
- Engineered LLM APIs for structured data extraction//decision support and visualized insights using PowerBI within Agile sprints, replacing Excel workflows
- Deployed AWS Amplify//RDS deployment pipelines, increasing system uptime to **99.9%** for **1300+** users

### Manager/Bartending Lead Bartaco

Sep 2022 - Present

- Ranked **#1** bartender across 30+ locations (350 employees) by increasing premium sales through targeted promotions.

## TECHNICAL SKILLS

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

**Frameworks:** FastAPI, ReactJS, NodeJS, Angular, ExpressJS, React Native, Spring Boot

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

**Data & ML:** LLM, PyTorch, Scikit-Learn, TensorFlow, PostgreSQL, NoSQL, Pandas, NumPy

## 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, increasing **~42%** in the accuracy of early dementia detection
- Researched latest tech papers from Boston Uni//NLM with datasets to engineer features//machine learning models
- Engineered a scalable doctor/patient dashboard web app with secure audio streaming for clinical trial data collection
- Combined ML/DL models with Audio encoding/codec to innovate the future of telehealth monitoring//disease detection

### UrSim: Fantasy Sport Lineup Optimizer | Typescript/React, Monte Carlo, PuLP, Numpy, AWS | [Github Link](#) Nov 2025

- Architected fantasy sports lineup optimization with quant mathematics simulations to deliver Fanduel DFS lineups
- Designed UI component library using TypeScript to reduce feature development time//maintain consistency
- Established algorithmic optimization from statistics for MLB/NFL/NBA fantasy sports lineups with **90%** efficiency
- Deploying **SaaS** desktop/web applications with a monthly subscription pricing model to drive recurring revenue

### Real-Time E-commerce Analytics Platform | NumPy, Pandas, Apache Spark/Kafka, ML, Big Data | [Github Link](#) Oct 2025

- Containerized analytics platform processing e-commerce datasets, using clustering algorithms for customer segmentation
- Engineered pipelines with ML models, using insights to deliver AI decision pipelines providing personal recommendations
- Optimized fraud detection using numpy, pandas, and scikit-Learn: achieved **95%+** accuracy rating with **<2%** false positives