

Harshith Reddy Peta

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EDUCATION

University of Wisconsin–Madison

B.S. in Computer Science, Certificate in Consulting, GPA: 3.8, Dean's List (7x)

Relevant Coursework: CS577 Algorithms, CS537 Operating Systems, CS540 Artificial Intelligence, CS544 Big Data Systems, CS564 Database Management Systems, CS571 User Interface Design

Madison, Wisconsin

Sept 2022 – May 2026

EXPERIENCE

Undergraduate Research Assistant, Computational Development Neuroscience Lab

June 2025 – Present

University of Wisconsin–Madison – Prof. Joao Moreira

Madison, WI

- Built a reusable **Python behavioral analysis framework** that processed **1,000+ experiment sessions** across 5 cognitive tasks, replacing ad hoc CSV review with subject-level quality-control outputs.
- Automated **20+ behavioral and linguistic metrics** across raw experiment files, reducing recurring analysis time by **60%** and standardizing exports for new participant batches.
- Built an **NLP modeling pipeline** that converted memory-writing responses from **30 prompts** into Word2Vec features and ran **50-repeat nested split-half validation** across Ridge, RBF-SVR, XGBoost, and ensemble models.
- Implemented an **fMRI reliability pipeline** that computed Cronbach's alpha and Guttman's G6 across subjects, Schaefer atlas parcels, and **3 task conditions**, replacing manual parcel-level checks with reusable CSV exports.

Full-Stack Software Engineer Intern

March 2025 – May 2025

Take2

Remote

- Optimized backend data access patterns by redesigning Firestore query structures and indexes, lowering retrieval latency by **40%** and reducing page load times by **1.5s**.
- Resolved **10+ production issues** across TypeScript components and Firebase security rules, decreasing user-reported defects by **30%**.
- Improved React Native screen responsiveness by **35%** by restructuring **state flow** and removing redundant re-renders.

Backend Java Developer Intern

May 2023 – July 2023

Helixotech Private Limited

Chennai, India

- Implemented **JWT-secured authentication and authorization APIs** using Spring Boot Security for healthcare platforms.
- Enhanced patient-record retrieval efficiency by **20%** through service-layer refactoring and indexed SQL query optimization.
- Shipped **4 production REST APIs** supporting **10,000+ patient records**, validated through **15 automated Swagger integration tests**.

HACKATHONS

Idea Fund La Crosse Hackathon | *Express.js, TypeScript, PostgreSQL, Workflow Automation*

Spring 2026

- Architected a **sales-to-finance workflow tool** that catches missing billing contacts, stale approvals, and incomplete handoffs before revenue gets blocked downstream.
- Shipped an Action Center surfacing **\$465K+ in deals** across ready-to-invoice, needs-info, and blocked states, eliminating the manual status-check loop between sales and finance.
- Extended the readiness checker for **multi-branch accounts**, so deals could be validated against branch-specific billing contacts, line items, invoices, and handoff requirements replacing a single account-level workflow.

PROJECTS

TruthGap | *TypeScript, Next.js, PostgreSQL, GitHub API, LLMs*

May 2026 – Present

- Built an **AI documentation checker** that compares README steps, API docs, config references, and example commands against the actual codebase to catch docs that no longer match the product.
- Seeded a benchmark repo with **30+ intentional documentation bugs** and combined rule-based checks with LLM claim extraction to return the broken claim, the source-file evidence, and a suggested fix for review.

AppTrack | *React, TypeScript, Node.js, Express, PostgreSQL, AWS*

Jan 2026

- Launched a **full-stack job application tracker** with saved applications, filtering, pagination, protected routes, and analytics dashboards, cutting manual tracking time by **~40%** compared with spreadsheet-based workflows.
- Optimized the Express/PostgreSQL backend with request validation, indexed queries, Dockerized deployment, and CI/CD on EC2, reducing average API latency from **~500 ms to under ~200 ms**.

TECHNICAL SKILLS

Languages: Java, Python, TypeScript, JavaScript, C, SQL, Bash

Frameworks/Tools: React, React Native, Flask, Spring Boot, Selenium, TestNG, Docker, Firebase, Git, Swagger, JUnit, Jira

Databases/Systems: PostgreSQL, MongoDB, Firestore, REST APIs, WebSockets, JWT, CI/CD, GCP, Linux

Certifications: AWS Certified Cloud Practitioner, AWS Certified Developer Associate