

ADITYA PALL

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EDUCATION

University of Wisconsin-Madison

GPA: 3.95/4.0

BS in Computer Science & Data Science

Expected Graduation: May 2028

- **Relevant Coursework:** Programming I, II, & III, Linear Algebra & Elementary Matrix, Data Science Modeling, Discrete Mathematics, Intro to Computer Engineering

TECHNICAL EXPERIENCE

- **Languages:** Java, Python, C++, C, JavaScript, Visual Basic, Assembly
- **Tools:** React, Electron, Git, AWS, FlexSearch, LanceDB, Vercel AI SDK, T-SQL
- **Concepts:** REST APIs, Linux/Bash, Object-Oriented Programming, Data Structures & Algorithms, Debugging, Testing

PROFESSIONAL EXPERIENCE

Data & Software Intern @ Keystone Technologies

May 2024 - Aug 2024 (On Site)

- Led a team of 3 interns to benchmark and optimize synthetic data generation pipelines using multiple sorting algorithms.
- Evaluated Quicksort, Merge Sort, and T-SQL sorting strategies on large datasets using Visual Basic and SQL queries, improving query performance by ~30% on 1M+ row datasets.
- Delivered a presentation synthesizing the interns' research, coding, and data analysis to the senior staff and the CEO of Keystone Technologies.
- Leveraged DB Visualizer for database schema visualization and data formatting, aiding in preparing data for SQL query optimization.

Software Engineer / iOS App Intern @ ZenZiee, Corp.

May 2026 - Aug 2026 (Remote)

- Contributed to iOS development on an NSF-funded mobile application aimed at reducing anxiety among teens worldwide
- Supervise frontend feature development in SwiftUI, owning architecture decisions and code review across the iOS team
- Collaborate with backend and AWS teams to translate cross-functional business questions into concrete iOS implementations
- Identify and execute optimizations to existing frontend code structures, automating processes to reduce engineering overhead
- Focus on minimizing AWS costs through frontend architecture decisions, including caching strategies, and reduced API call volume
- Contribute to weekly meetings, aligning iOS work with backend, infrastructure, and product priorities across the team

PROJECTS

AI File Explorer | Electron, JavaScript, React, Vercel AI SDK (echoforfiles.com)

- Built a desktop file explorer with LLM-assisted search and navigation using Electron, React, and local vector databases
- Engineered a file statistics dashboard with modern UI components to surface real-time analytics for file management
- Implemented hybrid semantic + keyword search combining FlexSearch indexing with LanceDB vector retrieval
- Generated embeddings using BAAI/bge-base-en-v1.5 to improve contextual matching for ambiguous filenames and folders
- Designed UX flows emphasizing clarity, quick filtering, and reduced clicks for common file operations and triage use
- Designed modular application architecture separating UI, search indexing, and embedding pipelines to enable scalable feature expansion

Local Loop | React, JavaScript, Google Maps API, Tailwind CSS (group-7-project.netlify.app/local-loop)

- Built a campus community web app with Google Maps-based discovery of study spots, posts, and active help requests.
- Designed a reusable component library handling posting, filtering, and reporting flows with consistent interaction patterns across views
- Implemented client-side filtering and search across posts with category tagging and live UI updates as filters change
- Integrated Google Maps Markers API with custom info windows and filtered marker rendering driven by active category selections in the UI
- Architected modular feature boundaries (posting, discovery, reporting) so new content types and filters could be added without touching shared UI

LEADERSHIP / AWARDS

- Recognized on the University of Wisconsin-Madison Dean's List for strong academic performance in the Fall 2025 and Spring 2026 term
- Earned the Marjorie E. Chapman Memorial Scholarship based on academic achievement
- Awarded AP Scholar with Distinction for consistent high performance across multiple Advanced Placement examinations
- Led independent development of multiple software projects while balancing tutoring and full-time coursework