PRANAV CHHABRA

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EDUCATION

University of Wisconsin – Madison   [Graduated: May 2024]

B.S. in Computer Science with Distinction | 3.9 GPA

Relevant Coursework: Data Structures and Algorithms, Software Engineering, Deep Learning, Operating Systems, Databases

SKILLS & CERTIFICATION

- **Languages & Frameworks:** JavaScript, Java, Python, Swift, SwiftUI, React, React-Native, Next.js, Node.js, Express.js, TypeScript
- **Backend & Cloud:** MongoDB, MySQL, AWS, GCP, Firebase, Docker, Pinecone
- **AI & Automation:** OpenAI, GPT Vision, AWS Rekognition, UiPath, Hugging Face, Puppeteer, Cheerio, RAG
- **APIs & Tools:** REST APIs, Stripe, Groq API, TDD, Agile
- **Certification:** AWS Certified Cloud Practitioner

DEVELOPMENT EXPERIENCE

Software Engineering Resident - Headstarter AI   [Jul 2024 – Present]

- Developed & deployed AI-driven applications, integrating LLMs, RAG, NLP, and real-time analytics into scalable systems.
- Built AI-powered platforms, including *Profscore* (professor rating with vector search) and *PantryPal* (AI-driven recipe planner), reducing manual effort by **95%**.
- Created fintech & customer support AI solutions, such as a *Market Anomaly Detection system* and *AI-powered customer support models* using *OpenAI & AWS*.
- Building an AI-powered Chrome Extension for productivity automation, leveraging context-aware intelligence..

Software Engineering Intern - TeammateME   [Jul 2024- Dec 2024]

- Developed and optimized the company's Next.js web platform and React Native (Expo) mobile app, enhancing performance and user experience.
- Improved website SEO and page load times by minifying CSS/JS in a large, complex codebase, boosting search rankings and performance.
- Designed & launched new features, refining UI/UX to improve usability across web and mobile.

Software Engineering Extern - Capital One   [Sep 2023- Dec 2023]

- Created "MonsterRewards" iOS app using Swift and Swift UI, increasing user engagement by **20%**. Applied Agile practices to iterate on features and rapidly adapt to changing requirements.
- Optimized MongoDB queries and incorporated AWS services to enhance backend scalability, improving system performance and reliability.

Software Engineering Intern - AiRo Digital Labs   [Jun 2022 – Aug 2022]

- Built automation scripts using UiPath and VB.NET, streamlining business processes and reducing manual task execution by **30%**.
- Integrated automation tools with cloud services for data storage and processing, saving **20** hours per week for the operations team.

PROJECTS

LLM Evaluation Platform | GitHub **|** Live Demo   [Jan 2025]

- Built a Next.js + TypeScript platform for parallel LLM evaluation (GPT-4, Llama-70B, Mixtral), cutting testing time by **80%**.
- Created a Recharts analytics dashboard for *real-time cost, token usage, and response time* visualization.

NeuroLens: Brain Tumor Classification | GitHub **|** Live Demo   [Nov 2024]

- Built an AI model for classifying brain tumors in MRI scans, achieving ~94% accuracy with a custom CNN and ~99.5% accuracy using the Xception model via transfer learning.
- Enhanced model interpretability by integrating Gemini 1.5 Flash to generate saliency maps, highlighting regions influencing tumor classification.

Customer Churn Prediction App | GitHub **|** Live Demo   [Oct 2024]

- Developed a full-stack churn prediction platform using Streamlit, Replit, and machine learning models (XGBoost, Random Forest, KNN).
- Enhanced model accuracy from **75% to 85%** through feature engineering and SMOTE for handling imbalanced data.
- Embedded Groq API to automate personalized email generation and provide tailored churn explanations.
- Visualized customer metrics with Plotly to help interpret churn probabilities, aiding in proactive retention strategies.

Phonicsjoy: Phonics Teaching Website | Github **|** Live Demo   [Sep 2024]

- Designed a phonics teaching website for kids, parents and teachers using React and Supabase, integrating real-time data for personalized learning experiences with AI-generated phonics stories.
- Improved user interaction by **20%** through customized phonics learning journeys.