

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 (Lambda, S3, EC2, CloudFront, Route 53, Bedrock, SES), 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, NLP, and real-time analytics into scalable systems.
- Implemented a professor rating platform with RAG & vector databases, improving search & recommendation accuracy.
- Built an AI-powered pantry management system that automated recipe suggestions, reducing manual input by **95%**.
- Led AI-driven fintech research, developing a Market Anomaly Detection system for financial insights.
- Developed AI-powered customer support solutions, integrating OpenAI, AWS, and real-time decision-making models.

Software Engineering Intern - TeammateME

[Jul 2024- Dec 2024]

- Developed and maintained full-stack applications using React, Node.js, and PostgreSQL, improving operational efficiency by **30%**.
- Implemented CI/CD pipelines with GitHub Actions to automate deployments, ensuring faster feature releases and improved code quality.
- Collaborated with cross-functional teams in an Agile-Scrum environment, delivering features **20%** faster.

Software Engineering Extern - Capital One

[Sep 2023- Dec 2023]

- Created “MonsterRewards” iOS app using Swift and SwiftUI, 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.
- Applied Agile methodologies, managed sprints, and delivered project **15%** ahead of schedule.

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](#) | [Link](#)

[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](#) | [Link](#)

[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](#) | [Link](#)

[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](#) | [Link](#)

[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.