Akilan Rammohan

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Education

University of Wisconsin-Madison Madison, WI

Bachelor's of Arts, Computer Science and Data Science *Sep 2022 — May 2026*

- Relevant Coursework: Algorithms, Data Structures, Machine Organization, Compiler Design, Computer Engineering, Discrete Math, Linear Algebra, Machine Learning, Deep Learning/Generative Models, Theory of Programming Languages

Work Experience

AI Engineering Intern May 2025 — Present

Appfaktors *Mountain View, CA*

- Build RAG pipeline for unstructured enterprise software architecture data
- Architect data ingestion, vector embedding, and storage pipeline
- Test and evaluate dozens of permutations of LLMs and embedding models on structured architecture generation tasks
- Technologies: CrewAI, PostgreSQL/pgvector, Docker, OpenRouter, OpenAI and huggingface embeddings

SAIL Fellow May 2025 — Aug 2025

School of Computer, Data, and Information Sciences (CDIS) *Madison, WI*

- Developed an agentic news aggregator, with the goal of developing a shared information canon
- Prompted agents to embed the intuition of a newspaper editorial board in their news sourcing efforts
- Sourced news data using RSS feeds, web scraping, and news APIs
- Technologies: CrewAI, Weaviate, Docker, OpenAI API, Next.js, FastAPI

Data Analyst May 2025 — Present

Think Fast Talk Smart, the podcast *Los Altos, CA*

- Determine best evaluation metrics, use classical machine learning models to predict episode performance
- Explore optimal episode posting cadence and episode titling patterns
- Create insightful and clear visualizations for business team to understand
- Technologies: Python, SQL, matplotlib, pandas, Weaviate, OpenAI API, scikit-learn

Undergraduate Researcher May 2024 — May 2025

NeuroErgonomics Lab *Madison, WI*

- Built a robust VR app for police training, and deployed to HTC Vive and Meta Quest 3
- Implemented LLM-enabled AI NPCs to replace in-person acting requirements of contemporary police training
- Developed prompt engineering framework through robust testing to ensure consistent AI behavior
- Technologies: Unity, C#, InworldAI, ConvAI, Python, R, Tobii, Pupil Labs

Projects

Deepfake Audio Detection (huggingface, pandas, Kaggle, librosa)

- Compared CNN, transformer, and conformer neural network architectures for deepfake audio detection
- Finetuned downstream classifiers in open source wav2vec2 and wav2vec2-conformer sequence classification models

TAVRFinder (Swift, SwiftUI)

- Developed iOS app that uses sizing algorithms to properly size transcatheter aortic valve replacement devices
- Available on App Store (with adjustments for HIPAA compliancy, full app is in use at local hospitals

NBA Win Predictor (scikit-learn, PyTorch, pandas, Kaggle)

- Neural network classifier to predict a win or loss for a team given their matchup and season stats up to that point
- Achieved 64% prediction accuracy after hyperparameter search and other model improvements

Skills

- **Programming Languages**: Python, Java, JavaScript/TypeScript, C, R, C#, Haskell, Swift
- **Technologies**: Git/Github, huggingface, Docker, CrewAI, Docker, FastAPI, PyTorch, Next.js, RAG