Akilan "Akil" 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, Compilers, Computer Engineering, Discrete Math, Linear Algebra, Machine Learning, Deep Learning, Programming Languages, Operating Systems, Matrix Methods in ML, Algorithmic Game Theory

Work Experience

AI Engineering Intern May 2025 — Aug 2025

Appfaktors *Mountain View, CA*

- Developed RAG pipeline for unstructured enterprise software architecture data
- Architected data ingestion, vector embedding, and storage pipeline
- Tested and evaluated 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 that handles bias and intelligently sources reputable news
- Tested agent hierarchy with combinations of orchestration agent and multiple subagents
- Sourced news data using RSS feeds, web scraping, and news APIs
- Technologies: CrewAI, Weaviate, Docker, OpenAI API, Next.js, FastAPI

Data Analyst May 2025 — Sep 2025

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

- Determined best evaluation metrics, used classical machine learning models to predict episode performance
- Explored optimal episode posting cadence and episode titling patterns
- Created 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*

- Developed robust VR app for police training, 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)

- 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

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#(Unity), Haskell, Swift
- **Technologies**: Cursor, CI/CD, LangGraph/LangChain, Git/Github, Docker, FastAPI, PyTorch, Next.js, RAG