Allen Daniel Sunny

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AI researcher and engineer focused on building explainable, user-centered ML systems.

Experience

University of Maryland College Park — College Park, Maryland
Graduate Research Assistant — *Sept. 2023 - Present*
- Designed the data architecture for the Career Services team at the Smith School of Business.
- Automated Power BI dashboards to streamline reporting and improve data transparency.

Kantar Analytics — Bangalore, India
Data Scientist / Associate Data Scientist — *Aug. 2018 - Jan. 2023*
- Built Walmart's global promotional engine to automate promotions and boost price accuracy.
- Deployed a price anomaly system that flagged e-commerce errors for Walmart Canada.
- Trained GPT-NeoX model to auto-generate product descriptions optimized for SEO.

Education

University of Maryland, College Park — College Park, USA
Master of Information Management — *Aug. 2023 - July 2025*

Visvesvaraya Technological University — Bangalore, India
Bachelor of Engineering in Computer Science and Engineering (with Distinction) — *Aug. 2014 - July 2018*

Research Projects

Master's Thesis – Tech Policy Lab — *Jan. 2025 - Present*
- Researching procurement agility, explainability, and public trust in public sector AI.
- Developed and evaluated a legally-defensible XAI prototype for SNAP eligibility.

Oxford AI Policy Group – Systemic Risk Monitoring — *Feb. 2024 - Apr. 2024*
- Designed a scraping pipeline to track LLM adoption across global sectors.
- Supported risk governance research of foundational models at the University of Oxford.

R Packages – Tools for Interpretable Machine Learning — *Jan. 2022 - Jul. 2023*
- **StructuralDecompose**: R package for decomposing level-shifted time series data.
- **TangledFeatures**: R package for feature selection in highly correlated datasets.

Academic Projects

RADAR: Retrieval Augmented Data Analysis and Representation [Code] — *Feb. 2025 - May 2025*
- Built a RAG system using LLaMA 3.1 8B to turn text prompts into visualizations.
- Integrated LangChain and Milvus for schema-aware data retrieval.

Dark Pattern Analyzer [Code] — *Aug. 2024 - Dec. 2024*
- Built a browser extension to detect deceptive UX patterns using DOM analysis and LLMs.
- Included auto-highlighting and GPT-generated inline explanations.

Trust in Transparency: How Explainable AI Shapes User Perceptions — *Aug. 2024 - Dec. 2024*
- Conducted interviews to explore how users interpret AI-generated explanations.
- Insights shaped an XAI interface for non-expert users.

Exploring the Effects of Explainability on Model Trust — *Feb. 2024 - May 2024*
- Conducted a survey-based study to assess user trust in different explanation types.
- Applied insights to improve an interactive explainability tool.

Technical Skills

Languages: R, Python, Go, TypeScript, TSQL, VBA
Skills: AI, Machine Learning, Large Language Models, Explainable AI, Prompt Engineering, Retrieval-Augmented Generation (RAG), Qualitative and Quantitative Research, Web Scraping, Data Retrieval, dbt
Frameworks: Transformers, Pytorch, LangChain, React, Redux, Node.js (Fastify), Spark, Druid, Hadoop, Milvus
Developer Tools: Anaconda, RStudio, Git, Google Cloud Platform, AWS, Power BI, Tableau, VS Code, Excel