

Aarav Singh

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EDUCATION

Ohio Wesleyan University

B.A. in Data Analytics

Delaware, OH

Expected December 2026

TECHNICAL SKILLS

AI & Machine Learning: LLMs, NLP Pipelines, Whisper (ASR), Embeddings, Semantic Search, Classification, Predictive Modeling, Model Evaluation, MediaPipe, Multi-Hand Tracking, Pose Estimation, Gesture Recognition, Real-Time Inference

Backend & Systems Engineering: Python, SQL, C++, REST APIs, Backend Services, Data Pipelines, Modular Architecture, Deployment, Git, Vercel, Firebase, Azure

Data & Analytics: Pandas, NumPy, Feature Engineering, Statistical Analysis, Dashboards, Tableau, Power BI

EXPERIENCE

Rev1 Ventures

Business Insights & AI Systems Intern (Hybrid)

Columbus, OH

Oct 2025 – May 2026

- Identified a core operational bottleneck in mentor–founder matching and led the end-to-end development of an **AI-powered matching platform** that became an internal Rev1 system across accelerator and bootcamp cohorts.
- Designed the matching engine using **semantic embeddings, structured scoring logic, and rule-based constraints**, enabling explainable alignment across skills, industry domain, founder stage, and availability.
- Replaced manual, spreadsheet-driven workflows with a production backend, **reducing operational effort by ~100 hours per cohort** and materially improving program scalability.
- Engaged directly in **high-level strategy and operations discussions** with Rev1 leadership; earned an **extended engagement** following initial deployment based on system adoption and impact.

GTPL Hathway

Business Analyst Intern

Ahmedabad, India

May 2024 – Aug 2024

- Built analytical models to estimate carbon credit generation from plantation projects, supporting sustainability planning and CSR investment decisions.
- Contributed to data-driven site selection for Miyawaki afforestation initiatives, balancing ecological impact with cost efficiency.
- Proposed optimization strategies projecting a **15% reduction in afforestation planning costs**.

PROJECTS

OPEF — AI Environmental & Compliance Intelligence Platform

Full-Stack AI • NLP Pipelines • Semantic Search • Regulatory Compliance • Vector Databases • Cloud Deployment

- Architected and built a **full-stack, AI-native web application from scratch**, spanning frontend interfaces and backend services for document ingestion, preprocessing, and orchestration of environmental and regulatory workflows (live link).
- Implemented explainable AI pipelines combining **NLP extraction, embedding generation, vector indexing, and semantic retrieval**, enabling fast, auditable querying across complex regulatory corpora.
- Led end-to-end technical execution of the prototype, contributing to **3rd place at OWU's U.S. Entrepreneurship Competition (USEC)** and securing **\$15,000 in prize funding**.

Gesture-Controlled DJ System (Computer Vision)

Real-Time Computer Vision • MediaPipe • Gesture Recognition • 3D Interaction • Low-Latency Systems

- Designed and implemented a **real-time, gesture-controlled DJ system** using MediaPipe for robust multi-hand tracking, enabling hardware-free control of playback, mixing, effects, and transitions.
- Integrated gesture inference with **real-time 3D object manipulation and scene orchestration**, engineering stability, latency mitigation, and false-trigger prevention for live interaction environments.

Semantic Search & AI Retrieval System

Semantic Search • NLP • Embeddings • Vector Retrieval • Reranking Pipelines

- Built a **production-grade semantic retrieval system** combining embedding-based vector search with reranking to deliver high-precision, explainable results across large unstructured corpora.
- Engineered end-to-end ingestion pipelines to transform raw documents into **structured, queryable representations**, supporting downstream analytics and decision-making workflows.