

# Sourab Shaik

Northwest Ohio

Software Engineer Building AI Systems

sourab.shaiks@gmail.com | (419) 378-7576 | sourab.tech  
github.com/ubernerd117 | linkedin.com/in/sourab-shaik

## Profile

I build AI applications for scheduling, document search, and clinical data analysis, from application code and model evaluation through deployment. My undergraduate research compared survival models for liver transplant outcomes. I have also built race telemetry software and supported it trackside during IMSA weekends.

## Engineering Experience

### Actual Reality Technologies

Perrysburg, OH

Software Engineer

Dec 2025 - Present

#### Autonomous Meeting Scheduling Agent Python, LangGraph, Azure OpenAI, Cosmos DB, Bicep

- Built a Microsoft 365 email scheduling agent with scheduling rules in code, conversation state that survives restarts, and an approval step in Teams.
- Added evaluation gates, deployment infrastructure, replay handling, and token accounting for an internal pilot; worked on booking intent and invitee selection.

#### Clinical Registry Analytics Platform Python, FastAPI, Neo4j, Next.js, Docker

- Built a registry graph explorer with ontology mappings and field explanations, configurable dashboards, and a statistical analysis service for testing hypotheses.
- Implemented Cox proportional hazards, Kaplan-Meier, and Aalen-Johansen estimators; corrected prevalence scaling and comorbidity encoding that had produced misleading results.

#### Enterprise Document Assistant Next.js, Azure AI Search, Entra ID, Microsoft Graph

- Built a retrieval-augmented generation application for an internal procedure library, with application and Teams chat plus an embedded PDF viewer for source documents.
- Enforced document permissions during retrieval, used SharePoint webhooks to update the index, and added semantic reranking.

#### AI Gateway LiteLLM, Railway, GitHub Actions, Blacksmith

- Took a LiteLLM prototype through CI setup, deployment infrastructure, and production cutover; documented the request pipeline and specified the control plane for the next phase.

#### Document Processing and Observability Go, Python, GCP, Terraform, OpenTelemetry, Grafana

- Designed a document-processing job lifecycle and versioned Go API. Led tracing across Python, Go, and Next.js, connecting requests through background messages and workflows.
- Added structured logs and dashboards as code; defined sampling and log-cardinality policies to control telemetry volume.

#### Data Science & AI Engineering Intern

Jan 2025 - May 2025

- Cleaned industrial process data and used principal component analysis (PCA) and clustering to investigate operating conditions associated with higher efficiency.

#### Software Engineering Intern

Feb 2024 - Aug 2024

- Built MDKCopilot race telemetry coaching software and debugged it trackside during IMSA weekends. Featured by BGSU.
- Developed Next.js and Flutter applications with REST APIs, including a LangGraph grant-writing agent that used client documents to generate narratives.

## Education & Research

**Bowling Green State University, Honors College**

Dec 2025

B.S., Computer Science & Mathematics: Data Science

GPA: 3.83

### Honors Project

*Explainable AI for Liver Transplant Survival Prediction: Integrating Immunological Mismatch Features*

Advisors: Dr. Robert Green and Dr. Christopher Rump | ScholarWorks@BGSU, 2025

- Compared Cox proportional hazards, Random Survival Forest, and DeepHit with and without molecular HLA mismatch features under matched cross-validation and shared preprocessing.
- Harmonized all-cause graft failure as the earlier of graft failure or death, with uniform five-year follow-up truncation and censoring.
- Found no material discrimination gains from HLA features over clinical baselines in this cohort under the pooled endpoint. DeepHit showed a small, variable gain; clinical variables dominated explainability summaries, with modest DR-locus physicochemical signals.

### Recognition

D Peter Sanderson Scholarship for computer science and ACM involvement; Center for Undergraduate Research Grant (2023, 2024); ACM BGSU Hackathon, 2nd prize (2023).

### Academic Projects

- **ASL Recognition:** Built a learning tool using TensorFlow Lite and OpenCV.
- **Honors Project Tracker:** Built a Flutter application for students and faculty to track milestones, deadlines, and requirements.
- **Ethical AI Analysis:** Examined ethical questions in AI deployment and proposed guidelines for responsible use.

**Coursework:** Algorithms, AI/ML Methods, Statistical Learning, Statistical Programming (R), Regression Analysis, DBMS, Software Engineering, Parallel Programming (OpenMP, MPI, CUDA), CS and Mathematics Capstones.

## University Roles

### Bowling Green State University

*President, ACM Student Chapter*

Aug 2022 - May 2024

- Organized workshops, hackathons, social events, and industry collaborations for the computer science community.

*Network Assistant, ITS*

Oct 2021 - Dec 2025

- Installed and maintained campus networking equipment and troubleshoot connectivity problems.

## Independent Work

**Job Search Tool (In Development)** TypeScript, Python, PostgreSQL, OpenRouter

- Designed a knowledge base that preserves accomplishment sources and snapshots of records used for resume and cover-letter generation. Built a model evaluation prototype and defined generation contracts; the production generation backend remains to be built.

**AI-Assisted Engineering Workflow** Codex, Claude Code, Git worktrees, GitHub CLI

- Wrote agent skills for planning and implementation, including worktree coordination and pull request review. Use them while making architecture decisions and checking the resulting code.

## Technical Skills

**Languages:** Python, TypeScript, Go, JavaScript, SQL, Cypher, R, C++, Dart

**AI Systems:** LangGraph, LangChain, Azure OpenAI, RAG, Azure AI Search, LiteLLM, OpenRouter, model evaluation

**Applications & Data:** FastAPI, Pydantic, React, Next.js, Node.js, PostgreSQL, Neo4j, Cosmos DB

**Cloud & Observability:** Azure, GCP, Railway, Docker, Bicep, Terraform, GitHub Actions, OpenTelemetry, Grafana