

Saarth Kishore

📞 (530) 376-4161 · 📧 Saarth0909@gmail.com · 🎓 Graduation- June 2027 · 🌐 Website- <https://saarth09.github.io/Personal-Website/>

SOFTWARE ENGINEER

Computer Engineering student at UC Davis building full-stack applications, AI systems, and data-driven tools. Experienced in Python, React, Java, and C++. Currently developing Omnitrix, a fully local personal AI assistant using LLMs, computer vision, and vector memory and contributing to a live UC Davis transportation analytics platform at ASUCD. Seeking software engineering opportunities to solve real-world problems at scale.

EDUCATION

University of California, Davis Major: Computer Engineering Minor: Mathematics

Relevant Coursework- Intro to Programming, Object-Oriented Programming, Data Structures and Algorithms, Algorithm Design and Analysis, Computer Networks, Circuits I, II, Intro to Computer Architecture, Partial Differential Equations, Intro to Abstract Mathematics

TECHNICAL SKILLS

Programming Languages: C, C++, Python, Java, JavaScript, Node.js, Next.js, JSON

Frontend Development: React.js, Frontend development, Dashboard Development, Rapid Prototyping, HTML, CSS

Backend & API Development: Backend Development, APIs, System design and development, Modern Web Applications, Software Engineering Fundamentals, PostgreSQL, Databases, SQL, Integration Testing, Pytest, Debugging, TypeScript

Data & AI: Machine Learning, Computer Vision, Image Processing, OCR, Image Classification, Object Detection, Feature Extraction, Model Inference, Prompt Engineering, LLMs, Local LLM Deployment, Retrieval-Augmented Generation, Embeddings, Vector Databases, ChromaDB, Ollama, OpenCV, NumPy, Pandas, Data Pipelines, Data Analytics

Game Development: Unreal Engine 5, Sandbox Game Design, Gameplay Systems, Physics-Based Gameplay, Procedural Object Generation

PROFESSIONAL EXPERIENCE

Software Developer- ASUCD Innovation and Research Lab

Dec 2025 - Present

<https://aggiesonthemove.irl.ucdavis.edu/>

Worked on a full-stack UC Davis transportation analytics dashboard that aggregates multi-modal mobility data into interactive visualizations.

- Aggregated transportation datasets from 9+ partners (Unitrans, DOTS, YoloBus, SPIN, Capitol Corridor, etc.) into a single normalized database, replacing siloed departmental systems.
- Built interactive query dashboards enabling non-technical users to explore ridership, parking, and permit trends through statistical summaries and peak-analysis visualizations.
- Supported data validation and format standardization pipelines to ensure accuracy and consistency across diverse source datasets.
- Collaborating on long-term platform expansion including new mobility categories, performance improvements for large queries, and documentation to broaden accessibility for students, planners, and researchers.

Beyond Art – AI-Powered Sandbox Game *Personal Project*

May 2026 - Present

Developing an Unreal Engine 5 sandbox game where players draw weapons, body parts, tools, and structures that become functional in-game objects.

- Built the core gameplay system around drawing-based upgrades, mapping sketch detail and creativity to damage, durability, movement speed, strength, and defense.
- Developed machine learning concepts for sketch classification, enabling the system to identify player-created objects such as swords, gloves, shields, legs, armor, and tools.
- Designed an AI-based attribute scoring pipeline that evaluates shape clarity, complexity, symmetry, and object-specific details to generate balanced gameplay stats.

Omnitrix – Personal AI Assistant *Personal Project*

March 2026 - Present

A fully local, always-on personal AI system that observes screen activity, learns user patterns over time, and provides real-time intelligent assistance through a custom-built interface.

- Built end-to-end AI pipeline using Ollama for local LLM inference with zero cloud dependency, ensuring complete privacy.
- Engineered a real-time screen perception layer using OCR and computer vision to give the AI a live context of the user's active window.
- Implemented a persistent vector memory system using Mem0 and ChromaDB, enabling the AI to learn and recall user habits and patterns across sessions.
- Designed a streaming response engine that delivers token-by-token output for near-instant perceived response time.
- Developed a sleek custom UI with a global hotkey trigger and system tray integration for seamless, always-on background operation.

Pokemon-Go Battle Analyst and Assistant *Personal Project*

Sep 2025 - Oct 2025

A machine learning tool to analyze Pokemon-Go battles and provide valuable insights for improvement and a statistical ranking of the top 500 pokemon in each league.

- Python and OpenCV for video analysis.
- Reduced manual analysis time from 3 hours to 3 seconds.