Amaan Bilwar

513-799-7001 | bilwarad@mail.uc.edu | Linkedin | Github | Website

EDUCATION

University of Cincinnati   Cincinnati, OH
Bachelor of Science in Computer Engineering   *Expected Graduation – 2027*

TECHNICAL SKILLS

Languages/Runtime: TypeScript, Python, Golang, C++, SQL/PL-pgSQL
Frameworks: React (Next.js, shadcn/ui), Remix, Flask, FastAPI
Developer Tools: AWS, Azure, Kubernetes, Spring Boot
Data & Infra:: PostgreSQL, Prisma, Redis, MongoDB, S3, Azure Blob, Kubernetes, Docker, Vercel, AWS CDK/Terraform
Video / ML: FFmpeg, Twelve Labs, OpenCV, TensorFlow, LangChain, CrewAI, Gemini, OpenAI, Whisper, MediaPipe
Testing / Dev Ops: Playwright, Jest, GitHub Actions (CI/CD), CloudWatch, Grafana

EXPERIENCE

Software Engineering Intern   Sep. 2024 – Present
Honeywell   *Atlanta, GA*

- Developed data pipelines with **Azure and PySpark**, improving data processing efficiency by **35%** and structuring logging data for optimized storage in **Azure Data Lake Gen2.**   .
- Engineered and fine-tuned machine **RAG** models with **LangChain** & **Chroma** vector DB, leveraging **AWS SageMaker** for advanced model optimization
- Developed a **chatbot** frontend with **Next.js** using the trained model to assist developers in **troubleshooting logging data**, achieving a **30%** reduction in issue resolution time by accurately pinpointing problem origins.

Software Engineering Intern   Jan. 2024 – Apr. 2024
Honeywell   *Alpharetta, GA*

- Streamlined customer onboarding by enhancing architecture with **Docker**, **PostgreSQL**, and **Spring Boot**, cutting onboarding time by **64%**
- Enhanced system **reliability** by integrating **Spring Cloud Azure**, **RabbitMQ**, and **Hazelcast**, validated through comprehensive **JUnit** tests
- Upgraded **legacy software** with version matching and stable releases, enhancing maintainability and compatibility.

PROJECTS

Reduct — AI Video Editor(CLI | *Postgres, FFmpeg, Twelve Labs*   Feb 2025 – Present

- Real-time pipeline indexes frames & transcripts, then generates FFmpeg edit graphs from user prompts using Twelve Labs semantic search + Gemini-Flash reasoning
- In-progress, ask me more about the project if you'd like a deep dive.

Reality Check | *CrewAI, Gemini, AWS Bedrock, OpenSearch*   Feb 2024

- Multi-agent fact-checking platform; cut hallucinations 45 % in blind tests; won "Most Technically Impressive" & "Best Use of AWS" at RevUC hackathon.

SafeStep | *TypeScript, Flask, Gemini, Google Maps*   March 2024

- Voice-driven transit assistant for visually impaired users; live speech-to-text & route updates;

OPEN SOURCE & COMMUNITY

powertrain-daq | *Bearcats Electric Racing at the University of Cincinnati*   Dec 2024 – Present

- Raspberry Pi CAN telemetry stack for Formula Electric SAE racecar team;

sponsorship-research-agent | *Bearcats Electric Racing at the University of Cincinnati*   Feb 2024 – Present

- TS/Python agent that scrapes & ranks potential sponsors