

Fahd Khattak

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Education

Louisiana State University | Roger Hadfield Ogden Honors College | Baton Rouge, LA May 2027
B.S. Computer Science | Business Administration Minor GPA: 4.24/4.3

Relevant Coursework: Operating Systems, Object Oriented Design, AI & LLMS, Data Structures, Numerical Methods

Awards & Honors: LSU President's Alumni Scholar, President's List (23'-25'), LSU President's Future Leaders In Research

Skills

Languages: Python, Verse, Bash, SQL, C, C++, Java, HTML, CSS, JavaScript, TypeScript, YAML

Technology/Frameworks: AWS, Azure, Kubernetes, Node.js, React, ChromaDB, PostgreSQL, NumPy, TensorFlow, Unsloth, Pandas, React, QT, Git, Jest, Pytest, Jira, Agile, Excel, CUDA, Linux, Unreal Engine 5, Unity

Experience

Software Engineer Intern | Northrop Grumman | Dulles, Virginia June 2025 - Aug 2025

- Drove a **430%** increase in max simulation runtime supporting **14+** concurrent headless scenarios with multi-instructor access by replacing legacy Windows VMs with a **PostgreSQL**-powered client-server architecture on **Kubernetes Cluster**
- Streamlined deployments and cut integration errors for **6** downstream teams working with a multiple-TB database by introducing a **Python** driven **Alembic** schema versioning system across a **PostgreSQL** stack
- Collaborated in an fast paced **Agile** team environment, participating in sprint planning and code reviews while delivering iterative improvements to simulation runtime, database reliability, and GUI tools

Machine Learning Intern | Shell | Baton Rouge, Louisiana Jan 2025 - May 2025

- Launched real-time analytics of railcar lock conditions via a centralized **Power BI** dashboard continually fed with model outputs through an end to end pipeline
- Delivered **85%** classification accuracy on defective railcar locks, validated on a held-out dataset, by fine-tuning **Llama-3.1-Vision-Instruct** with, **Python**, **QLoRA** via **Unsloth + Hugging Face**, boosting inspection reliability
- Achieved **sub-10 s** inference and shorter manual inspections on railcars, by **dockerizing** a 4-bit quantized vision model, exposing it via **REST API**, and integrating **RAG**-based retrieval from **Azure Blob Storage**

Backend Software Engineer | Smartective (LSU Biomechanics Lab) | Baton Rouge, Louisiana Aug 2024 - Present

- Enabled OSHA-compliant reporting with **<10ms** latency for **10+** endpoints by building a based real-time safety platform on **React.js** and **Node.js**, integrating biometric sensor data into Smartective's backend.
- Streamlined backend workflows with **JavaScript** for real-time data logging and multi-region payment processing by building **AWS Lambda** functions integrating **DynamoDB** with the **Stripe API**
- Improved deployment reliability with **100%** branch coverage by writing comprehensive **Jest** unit tests across the **JavaScript** codebase

Projects

Game Developer | Epic Games | Remote June 2023 - Present

- Collaborated on a **5-person** studio to create Fortnite maps in **Unreal Engine 5** with **C++/Verse** mechanics and **Object-Oriented design**, reaching **10M+ total plays**, **10k peak CCU**, and generating **\$250k** in revenue
- Sustained **>2,000** concurrent users and boosted player retention by **30%** by shipping rapid, bug-free iterations that improved **UI/UX**, gameplay systems, and animations based on player feedback

Impact Bridge | Fullstack | J.P Morgan Code For Good Oct 2025

- Built a full-stack matching platform using **React**, **TypeScript**, **FastAPI**, and **Python** to connect children with college athletic teams
- Increasing matching speed by **30%** by integrating **Gemini AI** and **SQLAlchemy REST APIs** to automate athlete-team communication

Leadership

Engineering Development Ambassadors (EDA) | Outreach Chair, Treasurer May 2023 - present

- Mentored **200+** club members, leading engineering demos, activities, and discipline talks at K-12 Schools
- Maintained rigorous oversight of a **\$30K/year** budget, supporting smooth and compliant financial operations