AADITYA JINDAL

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EDUCATION

Bachelor of Computer Science   Dec 2027
Arizona State University   *CGPA 4.0*

PROFESSIONAL EXPERIENCE

Undergraduate Teaching Assistant: Introduction to Python & Introduction to C++   January 2025
Arizona State University

- Assisting in teaching **C++ and Python** as an Undergraduate Teaching Assistant (UGTA) for CSE100 and CSE101 courses, managing and engaging **over 150 online students.**
- Responsible for **conducting doubt resolution and additional weekly study sessions** to help students prepare for industry and examinations.
- Collaborating with faculty to **enhance the course curriculum** and lead **weekly study groups**, expecting to improve **overall student performance by 15%.**

CERTIFICATIONS

Generative AI Fundamentals
Databricks   *Certificate Link*

AWS Cloud Technical Essentials
AWS + Coursera   *Certificate Link*

SQL
Hackerrank   *Certificate Link*

TECHNICAL PROJECTS

AR Fitness Coach   Flask, React.JS, Node.JS, MySQL, HuggingFace, OpenCV, Pytorch

- Developed AR Fitness Coach, a **personal gym-training webapp** that uses the webcam to provide **real-time overlay of ideal exercise form**, enabling users to maintain correct posture and reduce the risk of injuries.
- Created a **Flask server** to process webcam feeds, perform backend inferences, **detect keypoints**, and display marked feeds on the frontend using **React JS, Node JS, MySQL, Hugging Face, OpenCV YOLOv8, Flask, Websockets, and PyTorch**, enhancing user experience with real-time feedback.
- Led a team of **6 engineers** as **Project Manager**, planning the **system design and workflow**, and ensuring **timely delivery and high-quality output** for this application.
- Wrote device-agnostic code to ensure maximum utilization of resources, while ensuring cross-device compatibility, and achieved a **10% average frame rate** for the inferences locally.
- Project repository: https://github.com/RETR0-OS/EPICS-AR-Fitness-Coach.

DauntVR: VR Exposure Therapy Application   Python, AWS, Django, SQLite3, REST API, C#, Unity, Bootstrap, WebGL

- Developed a VR-based exposure therapy application for fear of heights with **90% user engagement**, featuring first-person simulations in Unity, demonstrating problem-solving and rapid prototyping skills.
- Created a **Django and Bootstrap dashboard** with SQLite to track performance metrics with **95% accuracy**, enhancing comprehension by **40%.**
- Leveraged AWS services to reduce processing time by **30%** and achieve **99.9% uptime**, demonstrating proficiency in Amazon's tech ecosystem.
- Developed an adaptive support system, improving user success rates by **20%.**
- Project won **honorable mention in a 24-hour hackathon**; writeup available at: https://devpost.com/software/dauntvr

LearnFlow: RAG-based Ed-Tech Platform Django, Python, Langflow, LangChain, Tavily, ChromaDB, Ollama, Groq API

- Designing and developing a **full-stack application** using **Django** for the backend and **React** for the frontend, connected through **REST APIs**, enhancing skills in comprehensive web development.
- Developing a **text-based RAG Generative AI application** using **Langflow**, **ChromaDB**, and **Tavily API** to create personalized skill roadmaps and provide instant resource clarification.
- Implementing a resource fetching system using Tavily search API, providing open-source learning materials.
- Engineering a dual-model AI system using **Ollama** with **QLoRA fine-tuned Llama-3.2-8B** for local development and **Groq API with Llama-3-70B** for production.
- Architecting the application for future **AWS deployment** using scalable technologies like ChromaDB.

TECHNICAL SKILLS

Languages: Python, MySQL, SQLite3, Java, C, Unity-Based C#, HTML/CSS
Frameworks & Libraries: Langflow, REST API, Django, Flask, Ollama, OpenAI API, Groq API, LlamaFile, Pandas, NumPy, Sci-kit Learn, SpaCy, NLTK, Requests, Selenium, Bootstrap, FontAwesome,
Developer Tools: AWS, Langflow, Tavily, ChromaDB, Git, Ollama, Postman, Jira, Unity, VS Code, PyCharm