

Atharva Biyani

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Education

The University of Texas at Dallas

Expected Graduation May 2025

Bachelor of Science, Computer Science

Richardson, TX

- GPA: 3.74/4.0
- Involvements: The Association for Computing Machinery, AWS Cloud Club at UTD (Operations Director), The Artificial Intelligence Society
- Relevant Coursework: Data Structures and Algorithms, Operating Systems, Computer Architecture, Database Systems, Software Engineering

Skills

Programming: Python, Java, C++, C, C#, JavaScript, TypeScript, Go, SQL, PHP, Hack, HTML, CSS | .NET, React, Angular, Node.js, Flask
Tools: Git, GitHub, Subversion, Jenkins, Linux, Unix, MongoDB, Snowflake | AWS, Azure, Google Cloud Platform, Docker, Kubernetes, Terraform

Experience

Software Engineer Intern

June 2024 - August 2024

Bank of America

Plano, TX

- Engineered a scalable **Python**-based drift detection algorithm for **5M+ JSON objects**, reducing processing time from hours to **4.5s** and achieving a **47,000x speedup** in data analysis
- Automated test case generation for complex JSON scenarios, boosting test coverage by **40 percent** and ensuring reproducible, consistent results across staging and production environments
- Architected modular **orchestration, detection, and alerting** pipelines, enhancing codebase scalability and cutting integration complexity by **50 percent** across core drift detection components
- Presented drift detection system optimizations to senior engineers and tech leads, leading to planned integration into **2 enterprise-scale risk pipelines** within the internal analytics ecosystem
- Documented pipeline architecture and testing strategy, resolving **10+ cross-team** handoff questions and streamlining integration efforts for downstream engineering teams

Software Intern

October 2023 - December 2023

Magnifico

Remote

- Shipped a video transcript tool using **React** and **AWS Lambda**, cutting latency to **15s** and improving UX through a redesigned profile interface
- Drove backlog grooming and sprint planning for transcript tool, clarifying **5+ ambiguous tickets** and accelerating feature delivery by **1 sprint**
- Collaborated across engineering to resolve **10+ Lambda bottlenecks** and optimized **MongoDB** using compound indexing and aggregation, accelerating analytics workflows by **35 percent** and eliminating async failure cases

Software Front End Intern

May 2023 - December 2023

APCON

Plano, TX

- Delivered **5 user-facing features** and maintained a UI-related support ticket rate under **1 percent** by managing **3 core Angular components** and resolving **35 production issues**
- Refactored **7 TypeScript components** for modularity and led **30+ code reviews** across Agile sprints, enhancing code maintainability and reducing runtime errors
- Facilitated QA alignment for **2 Angular features**, leading **4 bug triage syncs** to reduce release-blocking issues by **30 percent**

Projects

Database Optimization Assistant | Senior Design Project for USAA

- Designed a **Retrieval-Augmented Generation** (RAG) pipeline using locally hosted **Google Gemma**, generating **500+ SQL** schema recommendations to standardize naming conventions and improve Snowflake query efficiency across **100+ enterprise tables**
- Developed a natural language-to-SQL engine with **OpenAI GPT-3.5 Turbo**, parsing **250+ Snowflake DDL** scripts and delivering responses in **under 50ms**, enabling real-time access to structured queries
- Integrated **Flask-based** frontend with **LangChain** connectors and **Snowflake**, enabling dual chatbot support and processing over **1,000+ user queries** across **120+ enterprise schemas**

Movie Sentiment Analysis | Natural Language Processing Research

- Trained and benchmarked **XGBoost**, **LightGBM**, and **BERT** on **50000 IMDB reviews**, with XGBoost achieving top performance (**AUC 0.83**, **F1 0.8271**) in binary sentiment classification
- Preprocessed text with **NLTK** and accelerated training by **2x** on Google Colab GPU, improving F1 score and minimizing overfitting on unseen data

NBA Highlights Classifier | Computer Vision

- Programmed an end-to-end AI pipeline with **YOLOv5**, **MoveNet**, and **Random Forest** to classify **40000 NBA clips** with **77 percent accuracy**, using **OpenCV** and **Selenium** to auto-label **980 samples**
- Deployed the pipeline on **Azure** and automated training workflows with Jupyter Notebooks, increasing iteration speed by **3x** and improving precision by **12 percent** using grid search and cross-validation

Honors and Certifications

1st Place, NASA Tech Trek Hackathon (Urban.AI - sustainability tool for urban heat analysis)

Startup Grant Winner, Expanding Frontiers Space Tech Pitch Competition (**\$2,500 in seed funding**)

AWS Certified Cloud Practitioner, Issued by **Amazon Web Services**