Shantanu Shinde

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EDUCATION

University of Texas at Dallas, Richardson, TX, United States — Expected: May 2026
Master of Science, Computer Science – Data Science Track — **GPA 3.78**
Indian Institute of Information Technology, Nagpur, MH, India — June 2021
Bachelor of Technology, Computer Science and Engineering — **GPA 3.75**
Coursework: Database Design, Machine Learning, Statistical Methods for Data Science, Big Data Management and Analytics, Natural Language Processing, Design and Analysis of Algorithms, Neural Networks and Deep Learning

TECHNICAL SKILLS

Programming Languages: C++, Python, C#, Java, JavaScript
Tools & **Frameworks**: Lang Chain, Kubernetes, Apache Spark, .NET, Azure Dev Ops, pytorch, tensorflow, Unreal Engine, Unity3D, Spring boot, git, gRPC, REACT, MySQL, MongoDB, AWS, Azure
Certifications: Deep Learning, Advanced Data Science, Reinforcement Learning Specializations

WORK EXPERIENCE

University of Texas at Dallas, Richardson, TX, US
CS Grader — August 2025 – Present
- Help with grading and setting up of assignments for Data Structures and Introduction to Algorithmic Analysis.

CS Outreach Instructor — September 2024 – July 2025
- Helping to conduct and act as instructor for coding workshops and events for school students.

NI (National Instruments) (Emerson), Bangalore, India — January 2021 – June 2024
Staff Software Engineer
- Built internal tools including a GPT-3 based customer support chatbot and a similar Yammer post detector using **HuggingFace** BERT, **pytorch**, **Power Automate**, and **Azure Functions**, **Azure Containers**.
- Contributed to **gRPC** APIs and configuration utility for NI drivers and devices using **Python**, **C++**, and **.NET Core.**
- Implemented Hardware Licensing Activation API using **Java**, **Spring boot**, **Kubernetes**, and **Azure Pipelines**.
- Modernized NI Volume License Manager by migrating to encrypted **SQLite** from SQL CE, using **.NET**.
- Awarded "Rookie of the Year" at NI R&D Excellence awards 2022.

International Institute of Information Technology, Hyderabad, India — May 2019 – August 2019
Summer Intern
- Developed interactive 3D simulation and computer vision web applications using **JS**, **Python**, **OpenCV**, and **Flask**.

ACADEMIC & PERSONAL PROJECTS

CourseCOMET – Course & Professor related QnA bot, University of Texas at Dallas — May 2025
Tools Used: Python, langgraph, MySQL, REACT, NodeJS, Flask, nextjs, Tailwind CSS
- Used **LangGraph** and GPT-4 with prompt engineering and database schema to convert text into SQL queries and SQL results into natural language answers, & built a front-end web app using **NextJS**, **NodeJS** and **Tailwind CSS**.

Sign-opsis – Voice to ASL converter, HackAI 2025, University of Texas at Dallas — April 2025
Tools Used: Python, langgraph, Google MediaPipe, REACT, NextJS, Tailwind CSS, NodeJS, OpenCV, spacy, flask
- Used ASLCitizens dataset and **Google MediaPipe** to get coordinates for ASL signs and gestures.
- Converted speech to text using **OpenAI Whisper** and then text to ASL gloss tokens using **spacy**.
- Rendered 3d model of ASL using **PyVista** and generated animation video using **OpenCV** and **Moviepy**
- Created a frontend to take in audio/video file & to play the rendered 3d animation video using **NextJS**.

Don't Squish the Squirrels – Unity 3D Video Game, Personal project — January 2025-Present
Tools Used: Unity 3D, C#, Game development
- Fun mini games with the objective of helping cute squirrels collect nuts while avoiding obstacles & predators.

Character Recognition using CNN, Personal project — January 2020
Tools Used: Python, Tensorflow, Keras, opencv, kivy
- Trained a CNN using **Keras** to classify handwritten English characters with 94.73% validation accuracy.
- Built an interactive app using **OpenCV** and **kivy** to detect and classify hand-drawn characters in real time.