Shantanu Shinde

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EDUCATION

University of Texas at Dallas, Richardson, TX, United States — Expected: May 2026
Master of Science, Computer Science — **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, Springboot, git, gRPC, REACT, MySQL, MongoDB
Certifications: Deep Learning Specialization, Advanced Data Science Specialization, Reinforcement Learning Specialization

WORK EXPERIENCE

University of Texas at Dallas, Richardson, TX, US — September 2024 – Present
CS Outreach Instructor

- Helping to conduct and act as instructors 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 Yammer similar post detector using BERT, Power Automate, and Azure services.
- Contributed to gRPC API and web service development for NI hardware tools using Python, C++, and .NET Core.
- Implemented Hardware Licensing Activation API using Java, Springboot, Kubernetes, and Azure Pipelines.
- Modernized NI Volume License Manager by migrating to encrypted SQLite from SQL CE, using .NET.

International Institute of Information Technology, Hyderabad, India — May 2019 – August 2019
Summer Intern

- Developed interactive 3D simulation and computer vision web applications using JavaScript, Python, OpenCV, and Flask.

ACADEMIC & PERSONAL PROJECTS

CourseCOMET – Course & Professor related QnA bot, University of Texas at Dallas — January 2025 – May 2025
Tools Used: Python, langgraph, MySQL, REACT, NodeJS, Flask

- Stored UTD professor and courses data in MySQL database.
- Used LangGraph and GPT-4 with prompt engineering and database schema to convert text into SQL queries.
- Converted SQL results into natural language answers to the questions using GPT-4

Sign-opsis – Voice to ASL converter, HackAI 2025, University of Texas at Dallas — April 2025
Tools Used: Python, langgraph, Google MediaPipe, REACT, 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 and to play the rendered 3d animation video

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.
- Preprocessed image data by denoising and binarizing, then stored in CSV format for efficient model training.
- Built an interactive app using OpenCV to detect and classify hand-drawn characters in real time.