

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

WORK EXPERIENCE

Computer Science Grader August 2025 – Present
University of Texas at Dallas, Richardson, TX, US

- Help with grading and setting up assignments for Data Structures and Introduction to Algorithmic Analysis course.

Staff Software Engineer December 2022 – June 2024
NI (National Instruments) (Emerson), Bangalore, India

- Built customer support chatbot employing **OpenAI Python API**, GPT-3, **Node.js**, **REACT**.
- Developed Similar Yammer post detector leveraging **Huggingface BERT**, **Power Automate**, **Azure Functions**, **Azure Containers**.
- Modernized NI Volume License Manager by migrating to encrypted **SQLite** from SQL CE, making use of **.NET**, **Azure pipelines**, **Azure DevOps**, **Jenkins** improving security of the application.
- Worked on a modernized licensing application allowing new licensing models using **ASP.NET**, **Razor**.

Software Engineer July 2021 – December 2022
NI (National Instruments) (Emerson), Bangalore, India

- Implemented Hardware Activation Code Generation API using **Java**, **Spring boot**, **Kubernetes**, **MuleSoft**, **Azure pipelines**.
- Upgraded NI Licensing Manager to be Windows 11 compatible via **Winforms**, **.NET**.
- Created Hardware Configuration Utility for Linux for configuration of NI Devices and drivers, with **.NET Framework**, **Azure Pipelines**, **wine**.

Software Engineering Intern January 2021 – June 2021
NI (National Instruments) (Emerson), Bangalore, India

- Programmed **gRPC** APIs for NI Drivers for remote calls to the NI devices, making use of **Python**, **C++**, **GitHub**.
- Implemented **Linux** Web service NI devices for remote interfacing, using **C++**.

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

- Developed interactive 3D simulation and computer vision web applications through **JS**, **Python**, **OpenCV**, and **Flask**.

TECHNICAL SKILLS

Programming Languages: C++, Python, C#, Java, JavaScript

Tools & Frameworks: Lang Chain, Kubernetes, Apache Spark, .NET, Azure DevOps, pytorch, TensorFlow, Keras, tkinter, Unreal Engine, Unity3D, Spring boot, git, gRPC, REACT, MySQL, MongoDB, AWS, Azure, Databricks, Kafka, Visual Studio, Jenkins, Elastic search, MuleSoft, Docker, Tailwind CSS, NextJS, Node.js, Razor, ASP.NET

CERTIFICATIONS

Deep Learning Specialization, deeplearning.ai, Coursera

Advanced Data Science Specialization, IBM, Coursera

DevOps Foundation, LinkedIn

Reinforcement Learning Specialization, University of Alberta, Coursera

ACADEMIC & PERSONAL PROJECTS

Portfolio Website, Personal Project

June 2025

Tools Used: REACT, NodeJS, NextJS, Tailwind CSS, Vercel

- Designed responsive, interactive website showcasing my projects, experience and contact details with email message handling, leveraging **NextJS**, **Tailwind CSS**, **NodeJS** and deploying it on Vercel.

CourseCOMET – Course & Professor related QnA bot, University of Texas at Dallas

May 2025

Tools Used: Python, Lang graph, MySQL, REACT, NodeJS, Flask, nextjs, Tailwind CSS

- Retrieved and cleaned professor, courses and ratings CSV data, designed database schema and inserted data into SQL database.
- 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 powered by **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 utilizing **OpenAI Whisper** and then text to ASL gloss tokens through **spacy**.
- Rendered 3d model of ASL via **PyVista** and generated animation video employing **OpenCV** and **Moviepy**.
- Created a frontend to take in audio/video file & to play the rendered 3d animation video through **NextJS**.

Don't Squish the Squirrels – Unity 3D Video Game, Personal project

January 2025

Tools Used: Unity 3D, C#, Game development

- Designing minigames that are balanced and fun to play.
- Building minigames in **Unity 3D** game engine with **C#**.

Grounded Language Learning on Color Semantics, Indian Institute of Information Technology Nagpur

December 2020

Tools Used: Python, Google Colab, pytorch, Keras

- Explored grounded language learning by training deep learning models (LSTM, GRU) to map between natural language color descriptions and their corresponding RGB representations.
- Built and evaluated an encoder–decoder architecture analyzing performance with multiple metrics.

Character Recognition using CNN, Personal project

January 2020

Tools Used: Python, TensorFlow, Keras, OpenCV, kivy, Google Colab

- Trained a CNN utilizing **Keras** to classify handwritten English characters with 94.73% test accuracy.
- Built an interactive app with **OpenCV** and **kivy** to detect and classify hand-drawn characters in real time.

Remaking Super Mario Bros using Direct 2D, Indian Institute of Information Technology Nagpur

January 2018

Tools Used: C++, Direct2D

- Recreating 1st level of the classic Super Mario Bros game in C++ Direct 2D library.

PERSONAL ACCOMPLISHMENTS

Jonsson School Dean's Graduate Scholarship, University of Texas at Dallas

Fall 24 – Spring 25

Satish and Yasmin Gupta Fellowship, University of Texas at Dallas

Fall 24 - Spring 25

Rookie of the Year 2022, NI R&D Global Awards 2022

November 2022

Top 5 Presentations, NI Tech Bangalore 2022

June 2022