SHUBHAM PANDEY

sp6713@srmist.edu.in | 8002656291 | 2027
B.Tech, Computer Science and Engineering
Address : Near SRM institute of science and technology campus in Akash bihar colony

Education

SRM IST-Ghazhiabad 2027
B.Tech · Computer Science and Engineering CGPA - 7.17/10

D.A.V HIGH SCHOOL GOPALGANJ 2023
Class XII - BIHARSCHOOL EXAMINATION BOARD · PCM · Gopalganj ,Bihar Percentage - 75.6%

DAV PUBLIC SCHOOL THAWE GOPALGANJ ,BIHAR 2021
Class X - CENTRAL BOARD OF SECONDARY EDUCATION · GOPALGANJ,BIHAR Percentage - 63%

Experience

Cognifyz Technologies Oct 2026 - Nov 2026
Full-stack development · Full-stack developer · 1 month Online Internship

Projects

Student-Registration-Management-Portal | Link Oct 2026 - Oct 2026
· Node.js, Express.js 4.19, HTML5, CSS3, Bootstrap 5, SQLite, RESTful API AI/ML

Student Registration & Management Portal

- Developed a responsive, full-stack student management portal using **Node.js, Express.js, EJS, Bootstrap, and SQLite**, supporting student registration and record management.
- Implemented **RESTful APIs** and integrated frontend–backend communication for efficient data handling and application functionality.
- Integrated authentication, input validation, and security middleware to strengthen application security and data integrity.
- Implemented server-side caching, automated database backups, background tasks, and health monitoring to improve application reliability and maintainability.
- Deployed the application on **Render** with GitHub integration and configured production access over HTTPS.

-Neuralwave-ai-music | Link Oct 2026 - Oct 2026
· Python, PyTorch, LSTM, Streamlit, music21, Plotly, Web Audio API, pytest AI/ML

NeuralWave AI

- Developed a deep-learning-based music generation platform using **PyTorch and LSTM neural networks** to learn musical patterns from MIDI datasets and generate original compositions.
- Built a complete **MIDI preprocessing and model training pipeline** with dataset management, validation, checkpointing, and real-time training loss monitoring.
- Created an interactive **Streamlit dashboard** featuring piano-roll visualizations, browser-based audio playback, and MIDI export for digital audio workstations.
- Implemented autoregressive music generation with temperature-based sampling and automated unit and end-to-end testing using **pytest**.
- Deployed the application on **Render** and managed source code using Git and GitHub.

Vortex-AI-Hybrid-FAQ-General-Intelligence-Chatbot | Link Oct 2026 - Oct 2026
· Python, Flask, scikit-learn, TF-IDF, NLP, Google Gemini API, OpenAI API, HTML, AI & NLP
CSS, JavaScript

Vortex AI — Hybrid FAQ & General Intelligence Chatbot

- Developed a hybrid AI chatbot combining **TF-IDF and cosine similarity** for FAQ retrieval with generative AI models for general-purpose conversations, coding, and problem-solving.
- Integrated **Google Gemini and OpenAI APIs** with three routing modes: Auto, FAQ Only, and AI Assistant.
- Built a Flask-based web application featuring a 128+ FAQ knowledge base, dynamic FAQ management, multi-turn conversation history, and responsive UI.
- Implemented offline mathematical utilities, secure API key management, automated testing, and cloud deployment on Render.

Object Detection and Tracking Application | Link
Oct 2026 - Oct 2026
· Python, OpenCV, YOLOv8, PyTorch, Ultralytics, ByteTrack, BoT-SORT, Tkinter, Streamlit.
Computer Vision (Artificial Intelligence & Machine Learning)

- Developed a real-time object detection and tracking system using Python, OpenCV, and YOLOv8.
- Integrated ByteTrack and BoT-SORT algorithms to track multiple objects with unique IDs.
- Built a desktop GUI with live camera access, video uploads, and interactive detection controls.
- Implemented confidence scores, bounding boxes, motion trails, and real-time FPS monitoring.
- Added snapshot capture, video recording, and automated testing for reliable performance.

Certifications

Claude with the Anthropic API | Link
Mar 2026
Anthropic Education · d7t2gsy7irjb

Claude with Google Vertex AI | Link
Mar 2026
Anthropic Education · 4tj8vstv7wiw

Data Science Mastery 2025: Excel, Python & Tableau | Link
Feb 2024
Udemy · UC-4cb48d8f-5306-44ec-a7ad-18d77234338b

Android apps with artificial Intelligence | Link
Mar 2025
Udemy · UC-ed416c3b-Oe04-4e2e-89d4-fa5f590b3aab

High Quality Image Production With Artificial Intelligence | Link
Apr 2025
Udemy · UC-665ae7b8-8df8-4123-bc25-e87ff941098e

Skills

Programming Languages: C++, Python, HTML5, CSS3, SQL

Languages and Frameworks: Python , TypeScript, Tailwind CSS, Node.js, Express.js, Express.js 4.19, Streamlit, PyTorch, Bootstrap 5, Flask

Tools and Technologies: MongoDB, RESTful API, SQLite, Google Gemini API, pytest, Plotly

Areas of Interest: Artificial Intelligence, Machine Learning, Generative AI, Natural Language Processing (NLP), Large Language Models (LLMs)

Technical Skills: Model Training, Data Visualization, Backend Development, Frontend Development, Software Testing

Domain Knowledge: Artificial Intelligence, Generative AI and LLMs, Machine Learning

Languages

English [Limited Working Proficiency], Hindi [Native Proficiency], French [Fundamental Proficiency]

Links

LinkedIn, GitHub