RAVULA TANISHQ

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Portfolio: https://comfy-chaja-e5044a.netlify.app/

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GeeksForGeeks: https://www.geeksforgeeks.org/user/tanishqravula/

LeetCode: https://leetcode.com/tanishqravula/

PROFESSIONAL PROFILE

Results-driven Software Developer with extensive experience at Deloitte and a robust portfolio of AI-centric applications. Expert in architecting full-stack solutions using C#, .NET, and Angular, with specialized proficiency in Generative AI, LLMs (OpenAI, Gemini), and OCR automation. Proven track record of winning national hackathons and delivering enterprise-grade tools that significantly reduce operational costs through intelligent automation. Strong foundation in Data Structures, Algorithms, and Deep Learning.

TECHNICAL SKILLS

Python • GenAI • LLM (OpenAI, Gemini) • OCR API • Abby Flexicapture • Flask • MongoDB • SQL • MySQL • .NET • C# • Angular • Java • Data Structures • Web Development • PHP • AIML • DBMS • HTML • CSS • C++ • Javascript • Deep Learning • NLP • PyTorch • Keras • LangChain • Streamlit

WORK EXPERIENCE

Software Developer

September 2024 – Present

Deloitte

- Architected and maintained 'Xtract-K1', an enterprise-grade automation engine designed to process complex federal tax forms including 1065, 1041, and 1120s using C# and .NET Core.
- Engineered a high-precision data extraction pipeline leveraging advanced OCR APIs and Abby Flexicapture to achieve 98% accuracy in digitizing unstructured financial PDF data.
- Developed a responsive and intuitive dashboard using Angular 16 and TypeScript, enabling tax professionals to validate extracted data with real-time feedback loops and error highlighting.
- Optimized SQL Server database performance by restructuring indexing strategies and stored procedures, resulting in a 40% reduction in query latency for large-scale data migrations.
- Implemented a robust backend export module that maps processed JSON data into complex, multi-tab Excel financial templates, eliminating manual data entry for thousands of work hours.
- Collaborated in an Agile/Scrum environment, consistently delivering high-quality code fixes and feature enhancements within 24-hour turnaround times for critical production bugs.
- Facilitated the integration of Generative AI modules within internal Deloitte workflows to enhance document classification and metadata tagging using Python and LLM technologies.

PROJECTS

AI Mart: Agentic Bot https://tanishqravulaultraaiagenticbot.onrender.com/

Tech Stack: Python, LLM, NLP, LangChain, Streamlit, OpenAI API

- Architected an advanced multi-modal Agentic Bot utilizing Python and LangChain to process diverse data formats including PDF, Excel, CSV, PPTX, and Docx.
- Implemented a Retrieval-Augmented Generation (RAG) pipeline to enable context-aware question answering with significantly higher accuracy than standard GPT-4 out-of-the-box models.
- Engineered a real-time URL and YouTube video scraper that extracts and summarizes live web content using NLP techniques and custom scraping logic.
- Optimized LLM inference speed by 30% through prompt engineering and efficient context window management using Streamlit for the frontend interface.
- Deployed the agentic system on Render, ensuring high availability and scalability for public users seeking automated document analysis.

Home-Based Healthcare Platform https://tanishqravula.github.io/tanishq/

Tech Stack: Python, Machine Learning, MongoDB, Firebase, WebRTC, PHP, JavaScript

- Developed a full-stack healthcare ecosystem integrating Machine Learning models to predict disease onset with an 85% success rate based on user symptoms.
- Implemented real-time video communication between doctors and patients using WebRTC and Google Firebase for low-latency, secure medical consultations.
- Built an automated blood bank coordination module featuring real-time push notifications to alert donors and hospitals during emergencies.
- Integrated a MongoDB database to store and manage sensitive patient electronic health records (EHR) with high encryption standards.
- Designed a modular user interface for yoga guidance and mental well-being tracking, increasing user retention by 25% during the beta phase.

Affordable Fashion E-Commerce https://amazing-lollipop-e0dd4d.netlify.app/

Tech Stack: ReactJS, NodeJS, MongoDB, Express, Redux, HTML5, CSS3

- Designed and deployed a scalable MERN stack e-commerce platform focused on high-performance fashion retail and inventory management.
- Implemented Redux for centralized state management, ensuring seamless synchronization of user carts and product catalogs across multiple sessions.
- Developed a secure authentication system using JWT (JSON Web Tokens) and Bcrypt for robust user data protection and account security.
- Created an optimized search and filtering engine allowing users to navigate through thousands of SKUs based on price, category, and availability.
- Leveraged NodeJS and Express to build a RESTful API capable of handling 500+ concurrent requests during peak simulated traffic.

EcoAI Waste Manager

https://tanishqravulawastemanagementrecommedersystem-2j3v6dupjzpt9lc3n.streamlit.app/

Tech Stack: GenAI, Deep Learning, CNN, Folium, Google Gemini, Python, Overpass API

- Engineered 'EcoAI Assistant', a sustainable waste management platform utilizing a Convolutional Neural Network (CNN) to classify waste into 12 distinct categories.
- Integrated Google Gemini AI to provide context-specific DIY upcycling recommendations and detailed environmental impact reports for classified items.
- Developed a geospatial mapping feature using the Overpass API and Folium to visualize the nearest recycling centers in real-time based on user location.
- Implemented a Text-to-Speech (TTS) accessibility feature and automated YouTube video fetching for DIY tutorials using the YouTube Data API.
- Analyzed and processed large-scale image datasets using Deep Learning frameworks to achieve a validation accuracy of 94%.

Hydro Bot: AI-Based Generative Design

https://tanishqravulasihgrandfinale-n8acaufzqyq42uibpegcwr.streamlit.app/

Tech Stack: OpenAI, DALL-E 3, PyTorch, Keras, LSTM, GANs, OpenStreetMap

- Selected as a Smart India Hackathon (SIH) Grand Finalist for developing a Generative AI-driven toolkit for hydropower plant design.
- Built a predictive engine using Keras (LSTM) and PyTorch-based GANs to forecast optimal plant specifications and feasibility metrics.
- Integrated OpenAI DALL-E 3 and GPT-4 to generate automated construction blueprints and comprehensive engineering guides.
- Developed a geospatial module utilizing OpenStreetMap to identify optimal geographic locations for hydropower installation based on terrain data.
- Automated the generation of technical PDF summaries and instructional videos using Python-based content synthesis libraries.

Intelligent WhatsApp & Telegram Bot

Tech Stack: Python, Flask, NLP, LLM, Twilio API, Telegram API

- Developed high-utility automation bots for WhatsApp and Telegram leveraging Flask microservices and NLP-driven conversational logic.
- Integrated Twilio and Telegram APIs to provide users with instant image generation, map navigation, and real-time news updates.
- Implemented a video-fetching module that utilizes LLMs to parse user intent and retrieve relevant media content via automated search queries.
- Engineered an asynchronous messaging architecture to handle concurrent user requests without latency bottlenecks.
- Created a custom command-parsing engine allowing users to trigger complex workflows (e.g., location tracking, file conversion) via simple text commands.

Professional Portfolio & Brand https://comfy-chaja-e5044a.netlify.app/

Tech Stack: HTML, CSS, JavaScript, GSAP, Netlify

- Created a high-performance portfolio website showcasing technical projects and professional achievements with a focus on SEO and responsive design.
- Optimized frontend asset delivery using modern build tools, resulting in a Lighthouse performance score of 98/100.
- Integrated custom interactive components and GSAP animations to enhance user engagement and visual storytelling.
- Leveraged Netlify for continuous integration and deployment (CI/CD), ensuring 100% uptime and rapid content updates.
- Implemented automated contact forms and analytics tracking to monitor recruiter engagement and portfolio traffic.

EDUCATION

Vasavi College of Engineering **2024**
B.E. Computer Science and Engineering | **CGPA: 9.2**

Sri Chaitanya Techno School **2020**
Class XII | **Scored: 90%**

Sri Chaitanya Techno School **2018**
Class X | **Scored: 90%**

ACHIEVEMENTS

- Awarded Applause Award for exceptional performance in Q2 2025 at Deloitte.
- Winner of Devpost Student Hacks AI Hackathon.
- SIH-2023 Grand Finalist (Smart India Hackathon).
- Awarded 1st prize in Project Expo at Methodist College of Engineering.
- Awarded 1st prize in Code Sprint (College Fest).
- Awarded 1st best theme-based project in college (2023).
- Achieved All India Rank 3221 in JEE Advanced 2020.
- Awarded Top 5% in NPTEL Introduction to Machine Learning (Top Performer Silver Medal).

CERTIFICATIONS

- Introduction to Machine Learning (NPTEL - Silver Medalist)
- Java Programming (Coding Ninjas)
- Python Data Structures (Coding Ninjas)
- Amazon ML Summer School Program - 2023