HRITIK SINGH

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PROFESSIONAL SUMMARY

Proactive and detail-oriented Full Stack Developer with expertise in Python, Django, and the MERN stack. Skilled in building scalable web applications, RESTful APIs, and implementing deployment strategies using Docker. Experienced in leading teams and delivering high-quality software solutions, with a strong focus on collaboration and agile methodologies.

EDUCATION

Bachelor of Technology (B.Tech) - Computer Science and Engineering Expected 2025
Maharana Pratap Engineering College, Kanpur, Uttar Pradesh, India

Intermediate (Science) 2021
G P M S V M Inter College, Uttar Pradesh, India

High School 2019
G P M S V M Inter College, Uttar Pradesh, India

TECHNICAL SKILLS

Programming Languages	Python, JavaScript, SQL
Machine Learning & AI	Generative AI (GANs), CNN, QCNN, Hybrid-CNN, TensorFlow, Keras, Pennylane
Data Analysis Tools	Pandas, NumPy, Matplotlib
Data Visualization	Tableau, Power BI
Backend	Django, Node.js, Express, RESTful APIs
Database Management	MySQL, MongoDB
Frontend	HTML, CSS, JavaScript, React
DevOps Tools	Docker, Git
Cloud Platforms	AWS, RENDER
Other Tools	Postman, Figma

SOFT SKILLS

- Leadership and team management.
- Strong problem-solving and analytical abilities.
- Effective communication and collaboration.
- Adaptability to new technologies and market trends.
- Attention to detail and ability to meet tight deadlines.

PROFESSIONAL EXPERIENCE

Software Development Intern (Team Lead) Dec 2024 – Jan 2025
Bluestock Fintech, Remote

- Leading the development of "Profit.io," a financial analysis tool built using Python, Django, HTML, CSS, and JavaScript.
- Designed and managed backend architecture using Django and MySQL for data handling.
- Collaborated with cross-functional teams to integrate JSON-based APIs for seamless functionality.
- Supervised a team of developers, ensuring timely delivery of milestones and maintaining code quality.

Website Developer Intern Mar 2024 – Aug 2024
Taj India Voyages (Remote)

- Developed and maintained scalable web applications using PHP for the backend and HTML, CSS, and JavaScript for the frontend.
- Designed and optimized RESTful APIs to enhance application performance and integration.
- Managed databases using PHP, ensuring data security and scalability.

PROJECTS

Generative AI-Based Cybersecurity for Connected Cars and IoT Systems
Leveraged Generative AI (GANs) to simulate and prevent cybersecurity threats in connected cars and IoT-based automotive systems. This project addresses hacking risks and system vulnerabilities by generating realistic cyberattack patterns and analyzing weaknesses to enhance proactive security measures.

- Built a Flask-based REST API for real-time interaction with the GAN model.
- Simulated cyberattacks to test system vulnerabilities and identify mitigation strategies.
- Implemented a scalable design for future integration of real-time monitoring and adaptive security measures.

Tech Stack: Python, Flask, PyTorch, TorchMetrics, Postman.

Brain Tumor Detection Using CNN, QCNN, and Hybrid-CNN Models
Developed advanced CNN, QCNN (Quantum Convolutional Neural Networks), and Hybrid-CNN models to detect brain tumors from MRI images. Utilized .nii files from Kaggle datasets to train and evaluate models, achieving accurate predictions for tumor detection.

- Preprocessed .nii files for MRI scans to prepare data for model training.
- Designed and trained CNN-based architectures using TensorFlow, Keras, and Pennylane for hybrid quantum-classical processing.
- Automated tumor classification to enhance diagnostic accuracy for healthcare applications.

Tech Stack: TensorFlow, Keras, Pennylane, Python.

MERN Personal Portfolio
Built a responsive personal portfolio using the MERN stack to showcase projects and skills. Integrated React for an interactive UI and Node.js for backend functionality. Deployed on RENDER. (View Portfolio)

Email Bot
Built an email automation bot using Python and JSON to send customized emails to multiple recipients. Implemented robust error-handling mechanisms and logging for efficient execution.

Automated Attendance System
Developed a MERN-based application leveraging facial recognition technology for automated attendance. Integrated MongoDB for storing student data and Node.js for backend processing.

E-commerce Platform
Created a scalable e-commerce platform using the MERN stack. Implemented product management, user authentication, and payment gateways. Used Render for deployment.

Alpaca Image Generator Website
Built an interactive React-based website for generating customizable Alpaca avatars. (Try it here)

CERTIFICATIONS

- **Microsoft Azure** - AI Fundamentals (AI-900)

- **HackerRank** - 5-star badges in Python, JavaScript, SQL
- **HackerRank** - Cleared Python (Basic), SQL (Basic), JavaScript (Basic), and CSS Test
- **GUVI** - Certified in Python Programming
- **NPTEL** - Certification in C Programming and Assembly Language

EXTRA-CURRICULAR ACTIVITIES

- Selected for Generative AI-Based Cybersecurity project in i.mobilothon Hackathon 2024.
- Actively contributed to open-source projects, focusing on full-stack development.
- Organized coding workshops and participated in coding challenges to enhance problem-solving skills.

DECLARATION

I hereby declare that all the information mentioned above is true to the best of my knowledge and belief.

Date:
Place: Uttar Pradesh, India (HRITIK SINGH)