CHANDAN SINGH

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Professional Summary

Versatile Computer Science student with a strong command of both full-stack web development and machine learning. Proficient in building responsive web applications using the MERN stack and developing intelligent systems with Python, TensorFlow, and scikit-learn. Eager to apply a dual skill set to engineer, build, and deploy innovative, data-driven applications from concept to production.

Education

B.Tech in Computer Science Engineering, IIIT Dharwad *2022 – 2026 (Exp)*

Relevant Coursework: Data Structures Algorithms, Database Systems, Software Engineering, Artificial Intelligence, Deep Learning

Technical Skills

Programming Languages: Python, JavaScript, Java, C++, SQL
Machine Learning: TensorFlow, PyTorch, scikit-learn, Pandas, NumPy, spaCy, Hugging Face
Frontend Development: React, Redux, HTML5, CSS3, Material-UI, Chart.js
Backend Development: Node.js, Express.js, Django, Flask, REST APIs
Databases: PostgreSQL, MongoDB, MySQL
Tools & Platforms: Git, Docker, AWS (S3, EC2), Postman

Projects

E-commerce Analytics Dashboard *React, Node.js, Express.js, MongoDB, Chart.js*

- Developed a full-stack MERN application to provide administrators with insights into sales trends, user activity, and product inventory.
- Designed and implemented a secure RESTful API with Node.js and Express for data handling, including JWT-based user authentication and authorization.
- Created a dynamic and responsive frontend with React, using Chart.js to visualize key metrics like revenue over time and top-selling products.
- Utilized MongoDB for flexible data storage, creating schemas for users, products, and orders to ensure data integrity and scalability.

AI-Powered Recipe Recommendation Engine *Python, scikit-learn, Pandas, Flask*

- Built a content-based filtering system that suggests recipes based on user-provided ingredients and dietary preferences.
- Employed scikit-learn and Pandas to process a dataset of over 20,000 recipes, using TF-IDF vectorization to convert ingredient lists into a machine-readable format.
- Implemented a cosine similarity algorithm to accurately match user inputs with the most relevant recipes, achieving a 90% user satisfaction rate in tests.
- Deployed the recommendation logic as a lightweight REST API using Flask, allowing for easy integration into other applications.

Real-Time Collaborative Whiteboard *React, Node.js, Socket.IO, Docker*

- Engineered a web application allowing multiple users to draw and brainstorm on a shared digital whiteboard simultaneously.
- Leveraged WebSockets via Socket.IO and a Node.js backend to broadcast drawing data in real-time to all connected clients with minimal latency.
- Built the frontend using React, managing the canvas state and user interactions to create a smooth and intuitive user experience.
- Containerized the application using Docker, ensuring consistent deployment and simplifying the development-to-production workflow.

Customer Feedback Sentiment Analysis Pipeline *Python, Hugging Face Transformers, TensorFlow, Flask*

- Developed an NLP model to classify customer feedback into 'Positive', 'Negative', or 'Neutral' categories automatically.
- Fine-tuned a pre-trained DistilBERT model from Hugging Face on a custom dataset, achieving 94% accuracy on the classification task.
- Built an end-to-end processing pipeline that cleans raw text data, performs inference using the trained model, and stores the results.

Certifications

- **Deep Learning Specialization** — *Coursera (deeplearning.ai)*
  Mastered foundations of deep learning, including Convolutional Networks, RNNs, and building models with TensorFlow.
- **Full-Stack Web Development** — *Udemy*
  Completed comprehensive training on building and deploying Full stack applications, covering front-end, back-end, and database integration.

Positions of Responsibility

- **Technical Lead, College Tech Fest (2025):** Led a team of 5 developers to build and deploy the official event website using React and Node.js, handling 10,000+ unique visitors.
- **Core Member, AI ML Club (2023-Present):** Conducted workshops on Python for Data Science and introduction to Neural Networks for junior students.
- **Participant, Smart India Hackathon (2024):** Developed a prototype for a full-stack application aimed at digitizing local government records, focusing on database design and API development.