

CHARAN BASAVA

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PROFESSIONAL SUMMARY

Computer Science student with hands-on experience building full-stack web applications and applied AI systems. Skilled in Python, Django, React.js, REST APIs, machine learning, NLP, authentication, databases, and real-time web systems. Built end-to-end projects integrating transformer models, external APIs, and production-style application workflows. Seeking an entry-level Software Engineer / Full-Stack Developer role.

EDUCATION

B.Tech in Computer Science & Business Systems | SRKR Engineering College, Bhimavaram | CGPA: 8.21 | 2023–2026

Diploma in Computer Engineering | BVC Institute of Technology & Science, Batlapalem | Percentage: 87% | 2020–2023

EXPERIENCE

Full Stack Developer Intern | International Institute of Digital Technologies (IIDT) | May 2024 – Jul 2024

- Completed hands-on training in Python, Django, REST API development, strengthening backend and web application fundamentals.
- Contributed to a team-based academic project by implementing backend logic, authentication, database design, API integration, and input validation.
- Applied unit testing, debugging, system workflow analysis, and technical documentation practices under guided mentorship.

PROJECTS

Semantic Skill Matching in Recruitment Systems | Python, Flask, Sentence-BERT, scikit-learn, XGBoost, Pandas, NumPy, Llama API, Adzuna API

- Built an AI-powered recruitment system using Sentence-BERT embeddings and cosine similarity to identify semantically equivalent skills beyond keyword and TF-IDF matching.
- Designed an end-to-end pipeline for resume/job-description parsing, text preprocessing, threshold-based classification, skill-gap analysis, and job matching.
- Integrated XGBoost salary prediction, Adzuna job discovery, and LLM-based interview simulation to provide broader career insights.
- Achieved 88.67% accuracy, 87.45% precision, 86.92% recall, and 87.18% F1 on the final system evaluation; benchmarked SBERT against keyword matching and TF-IDF.

MoodTunes - AI Mood-Based Music Recommender | React.js, Django REST Framework, Hugging Face Transformers, DistilBERT, Firebase, Firestore, Spotify Web API, Tailwind CSS

- Developed a full-stack application that analyzes free-form user text with DistilBERT sentiment analysis and maps detected moods to music recommendations.
- Built Django REST APIs connecting the React frontend, transformer inference, Firebase authentication/data storage, and Spotify Web API.
- Implemented secure sign-up/login, personalized mood tracking, responsive UI, and embedded music playback for desktop and mobile users.

Drawsarious - Real-Time Multiplayer Drawing Game | Node.js, Express.js, Socket.IO, SQLite, bcrypt, HTML5 Canvas, JavaScript

- Developed a real-time multiplayer drawing and guessing platform with synchronized whiteboard actions, chat, turn-based gameplay, and live scoring using Socket.IO.
- Implemented authentication, private room creation/joining, password hashing with bcrypt, role switching, secret-word handling, and winner detection.
- Built responsive game flows with session protection and real-time feedback across connected players.

Crop Yield Prediction | Python, scikit-learn, Pandas, NumPy, Flask, Random Forest, Bootstrap, Plotly

- Built a machine learning web application that predicts crop yield from crop type, rainfall, temperature, soil pH, and N-P-K parameters.
- Developed a Flask-based interface for user input and prediction results, with visualizations for crop-wise yield, feature correlation, and rainfall-versus-yield relationships.
- Implemented a Random Forest regression workflow to process agricultural features and generate yield predictions through a browser-based interface.

TECHNICAL SKILLS

Languages: Python, JavaScript

Frameworks: Django, Django REST Framework, React.js, Flask, Node.js, Express.js

AI/ML: Sentence-BERT, Hugging Face Transformers, DistilBERT, scikit-learn, XGBoost, Pandas, NumPy

Web & APIs: REST APIs, HTML5, CSS3, Bootstrap, Tailwind CSS, Socket.IO, Spotify Web API

Databases & Tools: MySQL, SQLite, Firebase/Firestore, Git, Postman, Render

CERTIFICATIONS & ACHIEVEMENTS

- IEEE Xtreme 18.0 Programming Competition — Participant, Team PICODERS | Oct 2024
- Prompt Engineering — EDX | Jul 2024
- Web Development with HTML, CSS, and JavaScript — IBM via EDX | Jun 2024
- Python Essentials 1 & 2 — Cisco | Jan 2024
- AI Skills Workshop — SRKR Engineering College with Brainovision & AICTE | Jun 2025