Sudarshan Dudhe

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EDUCATION

Northeastern University, M.S. in Information Systems **Expected May 2025**
Relevant Coursework: Neural Modeling Methods & Tool, Big Data Systems & Intelligence Analytics, Data Science Engineering Methods and Tools, Advances in Data Sciences and Architecture

Yeshwantrao Chavan College of Engineering, Bachelor of Technology in Information Technology **Jun 2017**
Relevant Coursework: Artificial Intelligence, Machine Learning

PROFESSIONAL EXPERIENCE

Arges Global Limited *Full Stack Developer*, Mumbai, India **Jan 2021 – Aug 2023**

- Engineered a **web app** for **textile data** storage, management, and analysis, optimizing **order management**, generating insights from **10GB** of data quarterly, and automating **report generation** for improved decision-making.
- Reduced **manual workload** by automating the analysis of production and order status, saving significant time and enabling clients to gain actionable insights efficiently.

Deqode Solutions *Full Stack Developer*, Indore, India **Nov 2019 – May 2020**

- Managed **MERN stack** app development with **cryptocurrency integration**, improving team collaboration efficiently.

Simplify Reality, Inc *Full Stack Developer*, Gurugram, India **Apr 2018 – Nov 2019**

- Implemented **AI-driven customer service solutions** using **Python**, streamlining operations for **global enterprises**.
- Developed a **bot** for **Instagram engagement analysis**, boosting followers, account management, and affiliate features.

ACADEMIC PROJECTS

Neural Modeling and Machine Learning Projects **GitHub Repo:** Machine Learning Projects

- Designed and implemented advanced models, including **Decision Trees**, **SVMs**, **Dense Networks**, and **RNNs**.
- Developed projects in **text generation**, **numerical computation**, **weather prediction**, and multilingual **chatbots**.
- Applied techniques like **feature engineering**, **hyperparameter optimization**, and embeddings (**Word2Vec**, **GloVe**).
- Proficient in **Python**, **TensorFlow**, **PyTorch**, **Keras**, **MATLAB**, and data visualization tools (**Matplotlib**, **Seaborn**).

JobFit AI – AI-Driven Resume Optimization System — *Python, OpenAI GPT, Beautiful Soup, Selenium, Spacy, Pinecone, FastAPI, Apache Airflow, AWS S3, Snowflake, Docker, Streamlit* **GitHub Repo:** JobFit AI **Feb 2024**

- Developed an AI-powered system using **NLP** (**OpenAI GPT**, **Spacy**) to analyze resumes and job descriptions.
- Automated workflows with **Apache Airflow**, leveraging **AWS S3** for storage, **Pinecone** for embeddings, and **Snowflake** for querying.
- Built and deployed a scalable application with **Streamlit** and **FastAPI**, containerized using **Docker**.
- Designed predictive **ML models** and **deep learning** pipelines to enhance accuracy and optimize **decision-making**.

Autonomous Driving Perception and Object Detection — *Python, OpenLane-V2, YOLO, DepthAnythingV2, PyTorch, NumPy, Matplotlib* **Dec 2024**

- Conducted research on autonomous driving systems, leveraging the **OpenLane-V2 dataset** for lane topology prediction and 3D object localization.
- Developed pipelines for panoramic image blending and **360° environmental perception** using multi-camera inputs.
- Fine-tuned the **YOLO model** for high-accuracy detection of traffic signs, vehicles, and other road objects.
- Integrated depth estimation models to enhance **3D localization** and optimize spatial awareness for navigation.

The Influence of Birth Months on Marital Stability — *EDA, Data Analysis, Python, Statistical Evaluation, Visualization* **Dec 2023**

- Analyzed 4,900 divorce records to assess the impact of birth months on marital stability using **Python**.
- Investigated seasonal patterns and demographic influences to provide actionable insights for relationship studies.
- Applied **data structures** and **statistical models** to ensure clean and interpretable datasets.
- Used **predictive models** and **deep learning** techniques to identify trends in demographic data.

TECHNICAL SKILLS

Languages and Databases: Python (Scikit-learn, Pandas, NumPy, TensorFlow, Keras, PyTorch, NLTK), MATLAB, C++, R, Java, SQL, MySQL, Snowflake, MongoDB
Technologies: Machine Learning, Deep Learning, Regression, Data Analytics, ETL, EDA, Data Strategy, Apache Airflow, AWS, GCP, CI/CD, Docker, Streamlit, Compliance Tools
Skills: Statistical Modeling, Predictive Models, Data Structures, Cross-Functional Collaboration, Data Modeling, Problem-Solving, Presentation Skills