Yash Pal Singh Negi

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Machine Learning Engineer | NLP & LLM Enthusiast | Data-Driven Problem Solver
Skilled in Python, scikit-learn, HuggingFace, LangChain, and data visualization. Passionate about building real-world AI solutions using machine learning, NLP, and large language models..

Projects - Project Link

GDP Growth Prediction using Machine Learning
Live: Streamlit • *Code:* GitHub

- Developed a GDP growth prediction model using World Bank indicators, achieving **R² = 0.96** with **Gradient Boosting** by preprocessing and engineering **15+ economic features across 100+ countries**.
- Cleaned and transformed data, **performed exploratory data analysis** and designed an **interactive Streamlit dashboard** to visualize economic trends, compare multi-country GDP/inflation data.
- Skills: Python, XGBoost, Scikit-learn, Pandas, Numpy, Matplotlib, Streamlilt

Retrieval-Augmented Generation (RAG) Based Chatbot using Langchain
Live: Streamlit • *Code:* GitHub

- **Built a document question-answering application using (RAG)** by integrating LangChain, HuggingFace sentence transformers, and FAISS for semantic search across PDF, TXT, and DOCX files.
- **Developed a Streamlit-based UI for interactive NLP tasks**, allowing dynamic document upload, vector-based retrieval, and LLM-powered responses using OpenRouter APIs.
- Skills: Python, LangChain, HuggingFace Transformers, FAISS, Streamlit,RAG, NLP, LLMs, OpenRouter API, Git

TalentScout – AI-Powered Technical Interview Chatbot
Live: Streamlit • *Code:* GitHub

- Designed and deployed an **AI-driven Streamlit chatbot** that dynamically generates and validates technical interview questions based on user-provided tech stack and experience using free OpenRouter LLMs.
- Engineered a **structured data pipeline to capture candidate information** and Q&A history, storing responses in a clean, analyzable CSV format for HR and recruitment workflows.
- Skills: Python, Streamlit, OpenRouter API, Prompt Engineering, Pandas

Diamond Price Prediction

- Designed and evaluated multiple regression models (Decision Tree, Random Forest, XGBoost) to predict diamond prices(Kaggle dataset), achieving RMSE of **536.91** and **R² (accuracy)** of **0.982** with **XGBoost**.
- Implemented end-to-end ML pipeline including data preprocessing (encoding, scaling), model training, cross-validation, and hyperparameter tuning using GridSearchCV.
- Skills: Python,Pandas, NumPy, scikit-learn, Matplotlib, Seaborn

Yoga Balance - Web Application for Client
Live: Vercel • *Code:* GitHub

- Developed a **responsive web application** utilizing **React.js**, **React Router**, and **CSS** to create a user-friendly interface and improve page load performance.
- Designed and integrated **reusable UI components** (Navbar, Footer, Hero) to ensure a seamless, consistent design across the website and enhance **user experience (UX)**.
- Skills: React.js, React Router, HTML5, CSS3, JavaScript, Responsive Web Design (RWD)

Internship

Utilitarian Labs | Salesforce Developer Intern   **2 Nov, 23 - 2 Feb, 24**
- Developed automation and UI components using Apex, Flows, SOQL, Aura components, and Lightning tools.
- Developed a parent onboarding portal for real-time tracking of student enrollment and document submission and automated workflows with Salesforce backend to enhance interactivity, communication, and data visibility for school administrators and parents.

Maruti Suzuki Manesar Car Plant | Production Intern   **10 Jun, 22 - 10 July, 22**
- Gained hands-on experience in car manufacturing from raw material to final product with exposure to automation and plant systems.
- Worked on identifying look-alike/interchangeable parts using Poka Yoke techniques and proposed process improvements.

Skills

- **Languages : Python**, C++,MySQL
- **Frameworks :** Django,ReactJS,**Langchain**,**StreamLit**
- **ML/NLP :** Pandas,Numpy, Scikit-learn, NLTK,TensorFlow,Deep Learning
- **DevOps & Tools :** Power BI, Docker, Git, JIRA, CI/CD Pipelines, GitHub
- **Interests :** API,Artificial Intelligence, Machine Learning, Automation, Data Visualization

Education

- **B.Tech |** HNBGU **|** 2023 **|** 6.6 CGPA
- **12th |** K.V.S **|** 2019 **|** 84%
- **10th |** D.P.S **|** 2017 **|** 9.6%

Certification

- **Python basic** certificate provided by hacker rank.
- **SQL Advance** certificate provided by hacker rank.