SHIV NARAIN

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OBJECTIVE

Driven to design and implement data-driven systems that translate complex data into actionable outcomes, with hands-on experience in machine learning, backend development, and real-time applications. Looking to contribute to high-impact projects through strong problem-solving and execution.

SKILL

Machine Learning & AI: Scikit-learn, XGBoost, Random Forest, Gradient Boosting, NumPy, Pandas, NLP
Generative AI: LangChain, RAG Pipelines, Prompt Engineering, OpenAI API, Hugging Face Transformers, FAIS
Deep Learning: PyTorch, TensorFlow, CNNs, Transfer Learning
Backend & Systems: FastAPI, Flask, REST APIs, Async Processing, JWT Authentication, Pydantic
Databases: PostgreSQL, SQLAlchemy, Redis, MySQL, SQLite
Tools & Technologies: Docker, Git, GitHub Actions, Linux, Streamlit, Render
Programming: Python, Java, JavaScript

EXPERIENCE

ML-Based Health Prediction & Decision Support System (Patent Published - Govt. of India, App. No. 202611006333 A) | GitHub *Sept 2025 – Jan 2026*

• Developed a machine learning–based aquaculture health prediction system to estimate microbiome health scores using water quality and environmental parameters
• Implemented feature engineering techniques (stress index, nutrient balance, seasonal components, water quality index) to enhance model performance
• Trained and evaluated multiple regression models (Gradient Boosting, Random Forest, XGBoost) using Scikit-learn pipelines with preprocessing (scaling, encoding)
• Built an interactive Streamlit application supporting real-time single and batch predictions with outputs
• Designed a rule-based recommendation layer to translate predictions into actionable interventions for fish health management . Performed model evaluation using metrics such as R^2 and MSE, and incorporated feature importance / explainability analysis (SHAP)

PROJECTS

AlphaPulse | AI-Powered Crypto Futures Trading Bot | GitHub | Live
• Designed a machine learning pipeline using TimeSeriesSplit and 14 technical indicators to generate next-bar trading signals with confidence scoring
• Implemented a vectorized backtesting engine modeling transaction costs, slippage, and risk metrics for realistic performance evaluation
• Built an interactive dashboard and modular CLI integrating Binance API, enabling real-time signal monitoring and controlled order execution

SniURL | URL Shortener Service | GitHub
• Developed a URL shortening service with unique link generation, redirection, and click tracking, handling high-frequency requests with integrated analytics
• Integrated Redis caching to optimize lookup performance and reduce database load, improving efficiency

AnyDoc | Document analyser | GitHub | Live
• Developed an AI-based application to summarize documents, extract key insights, and enable question-answering using LLM APIs
• Implemented document parsing, prompt engineering, and chunk-based processing for handling inputs
• Built a Streamlit interface for real-time interaction and automated document analysis

EDUCATION

Pranveer Singh Institute of Technology (PSIT) *Kanpur, India*

- B.Tech — Computer Science & Engineering (AI) CGPA 6.77 *June 2024 – June 2028*

UP KIRANA SEVA SAMITI VIDYALAYA

- INTERMEDIATE – 80% *2024*
- HIGH SCHOOL – 94% *2022*

ACHEIVEMENTS

- Patent Filed — AI-based Aquaculture Health Predictor Verify
- Oracle Cloud Infrastructure 2025 Certified AI Foundations Associate Verify
- LeetCode rating 1541 — consistent problem solver with 150+ problems