Surya Vardhan Reddy Puchalapalli

Houston, TX | +1-346-628-8609 | surya.unf257@gmail.com | LinkedIn | GitHub | Portfolio

Professional Experience

ReVenture Systems (Remote) *Remote*
AI Agent & Automation Intern *Jun 2025 – Present*

- Built intelligent workflows that connect voice, email, and document systems to handle client outreach and onboarding with minimal human input.
- Used LangChain, n8n, and ElevenLabs to develop agents that search documents, generate personalized responses, and deliver them through text and voice.
- Cut down manual outreach time by 80% by streamlining lead handling from first contact to follow-up.
- Designed internal dashboards in Notion to coordinate tasks, monitor pipeline activity, and keep team updates organized.

University of Houston – IT Department *Houston, TX*
Instructional Assistant (Analyst) *Jan 2024 – May 2025*

- Built Python scripts to automate weekly data collection from 3+ sources (Cape sensors, HPE GreenLake, Aruba Central), saving 3 hours/week of manual effort previously spent on Excel consolidation.
- Centralized Wi-Fi usage and signal data for 6,500+ access points into a single Excel file, enabling faster diagnostics of low-performance zones across the university campus.
- Integrated Excel with Power BI to auto-refresh dashboards used by IT managers in weekly meetings, reducing preparation time from 3–4 hours to under 5 minutes.
- Helped improve Wi-Fi coverage by 20% by identifying poor signal zones and supporting infrastructure upgrades including the installation of new routers in 10+ buildings.

Skills

Programming Languages & Visualization Tools: Python, R, SQL, Git, Tableau, Power BI
Programming Tools & Platforms: n8n, Notion, Slack, ElevenLabs, GitHub, Streamlit
Libraries & Frameworks: LangChain, ChromaDB, FAISS, OpenAI, OpenCV, PyTorch, TensorFlow, Scikit-learn, Keras
GenAI Techniques: Prompt Engineering, Retrieval-Augmented Generation (RAG), Semantic Search, Voice Generation

Projects

Financial Risk & Customer Analytics Platform
Python, XGBoost, Scikit-learn, Streamlit, Power BI, LangChain, OpenAI

- Built a unified platform to detect fraud, flag anomalous transactions, segment customers, and predict lifetime value using real/synthetic financial data; deployed interactive dashboards and apps for business use.
- Detected fraud with 97% accuracy and forecasted customer lifetime value with strong precision; added SHAP-based model explainability and PDF Q&A using LangChain.

Disneyland Visitor Experience Dashboard
Python, NLTK, TextBlob, Tableau

- Reviewed 40,000+ customer reviews to identify common visitor concerns across Disneyland parks using NLP.
- Engineered 45+ features from 6 base fields with Python, built Tableau dashboards showing trends in satisfaction and complaints by year and country.

Generative AI Cold Email Generator
Python, Llama 3.3, LangChain, ChromaDB

- Built a role-aware cold email generator powered by LLMs, scraping job descriptions and matching them with candidate profiles.
- Achieved 93% semantic match accuracy by integrating ChromaDB for similarity search and deploying a Streamlit-based UI.

Education

University of Houston, Houston, TX *May 2025*
Master of Science in Engineering Data Science
Relevant Coursework: Probability and Statistics, Data Science, Data Analysis, Digital Image Processing, Big Data Analytics, Database Management Tools, Data Mining for Engineers, Applied Statistics for Technology, Information Visualization, Machine Learning

Sathyabama Institute of Science and Technology, Chennai, India *May 2023*
Bachelor of Engineering in Computer Science
Relevant Coursework: Python and Problem Solving, Data Structures, Database Management Systems, Machine Learning, Big Data Analytics, Probability and Statistics, Object-Oriented Analysis & Design, Artificial Intelligence, Augmented & Virtual Reality

Research Publication

Fish Species Classifier for Allergic People using Convolutional Neural Network (CNN) Algorithm
Conference: 2023 7th International Conference on Computing Methodologies and Communication (ICCMC)
DOI: 10.1109/ICCMC56507.2023.10084124
Summary: Proposed a Convolutional Neural Network (CNN)-based fish classification model trained on 9,000 images across 9 classes to detect species causing seafood allergies. Achieved 99.6% classification accuracy using TensorFlow, supporting allergy prevention and aiding professionals in clinical immunology and fish species analysis.