

SAI SANJAY POTLURI

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PROFESSIONAL SUMMARY

Data Science and AI Research Expert with advanced proficiency in developing and evaluating Large Language Models (LLMs) and statistical models. Proven track record of designing rigorous evaluation rubrics, generating high-quality synthetic data and code, and improving AI accuracy by over 20%. **Specializes in prompt engineering, reward modeling, and translating data science expertise into gradable criteria for AI systems.**

TECHNICAL SKILLS

Languages: Python, SQL, Java, JavaScript, HTML, CSS, C++

Developer Tools: MS Excel, Tableau, Git, Docker, VS Code, IntelliJ, Eclipse

AI/ML Libraries & Frameworks: PyTorch, TensorFlow, Transformers, pandas, NumPy, scikit learn, spaCy

Concepts: LLM Evaluation & Fine-Tuning, Reward Modeling, Statistical Analysis, Hypothesis Testing, Synthetic Data Generation, Business Analysis, Data Visualization, Time-Series Analysis, RESTful APIs, Agile Methodologies

EXPERIENCE

Graduate Research Assistant

Aug 2024 – Jul 2025

Kennesaw State University

Atlanta, GA

- **Evaluated AI-generated data analysis** from models including Phi-3.5, Mistral, and Gemma for **quality, accuracy, and relevance** against **detailed rubrics**.
- **Conducted statistical analysis and modelling** for open-ended research prompts, achieving **86.23% accuracy** in mental health diagnostics and an **83.1% F1-score** in fake news detection.
- **Designed prompts and created detailed rubrics** for reward modelling and evaluation of LLM outputs, defining clear **gradable criteria** for performance assessment.
- **Produced gold-standard responses**, including **2,040 synthetic mental health scenarios** with explanatory notes, used to train and benchmark AI systems.
- **Translated data science reasoning and decision-making** into a hybrid annotation framework, improving **evaluation** accuracy by **15-22%** across domains.
- Applied **strong understanding of data analysis techniques and machine learning principles** to **identify patterns and trends** in a corpus of **44,898 news articles**.

Associate Professional Software Engineer

Feb 2023 – Aug 2023

DXC Technologies

Hyderabad, India

- Synthesized and maintained financial ATM applications using IBM mainframe technologies: COBOL, JCL, IMS-DC, and IMS-DB.
- Monitored performance of 100+ jobs and debugged errors, ensuring **99.9% system uptime** and demonstrating **strong attention to detail**.
- Collaborated with 3 cross-functional teams, improving application efficiency by 25%.

Data Science Intern

Dec 2022 - Jan 2023

TwiLearn Ed Tech Pvt. Ltd

Hyderabad, India

- **Collected, transformed, and analyzed** 6+ years of sales data using **Python (pandas, NumPy)** to drive informed decision-making.
- **Visualized data** through 5 Tableau dashboards to communicate sales trends, enabling **data-driven insights**.
- Compiled key KPIs to support critical business decisions, demonstrating ability to **identify patterns** and **communicate insights clearly**.

PROJECTS

Heart Disease Diagnostics | *Python, NumPy, Pandas*

Oct 2022 - Dec 2022

- **Applied statistical modelling and machine learning principles** on a dataset of 1,000+ patient records to **identify patterns** correlating with heart disease.
- **Conducted statistical analysis** including T-tests and ANOVA to validate findings and ensure **quality** of insights.
- **Communicated insights clearly** through visualizations that improved pattern recognition efficiency by 40%.

Shopping Sales Data Analysis & Visualization

Cart | *C#, HTML, CSS, JavaScript, SQL*

Apr 2024 – May 2024

- Designed and implemented a database system managing 500+ car parts across 10 categories.
- Scripted SQL queries for data extraction and analysis to support business decision-making.
- Automated reports for sales trends and inventory management, demonstrating ability to design rigorous methods of analysis.

Home Automation | *Python, HTML, CSS, Arduino UNO*

Nov 2021 - Jan 2022

- Modeled a responsive web interface using HTML and CSS for controlling home automation devices.
- Integrated frontend with Arduino-based backend for real-time device control.
- Demonstrated ability to work on full-stack projects involving both hardware and software components.

SAM: A Smart Assistant | *Speech_recognition, pyttsx3, pywhatkit, pyjokes*

Mar 2022 – May 2022

- Built a Python-based virtual assistant with a user-friendly interface for voice command processing.
- Incorporated external APIs for features like YouTube playback and Wikipedia information retrieval.
- Implemented error handling for robust performance in various usage scenarios.

Airline Management System | *COBOL, JCL, IMS-DB, IMS-DC*

Feb 2023 – Apr 2023

- Engineered a control logic in COBOL to calculate passenger discounts based on various input criteria.
- Utilized JCL, IMS-DB, and IMS-DC for database management and transaction processing in a mainframe environment.
- Collaborated with a team of five to debug, test, and deploy the airline management system on a remote mainframe.

EDUCATION

Kennesaw State University (CGPA: 3.3)

Atlanta, GA

Master of Science in Computer Science

Jul 2025

Relevant Coursework: Data Structures, Algorithms, Object-Oriented Programming, Web Development, Database Systems, Machine learning, SQL

Jawaharlal Nehru Technological University

Hyderabad, Telangana, India

Bachelor of Technology in Electronics and Communication Engineering.

Aug 2022