

# Pranav Gujarathi

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Senior AI Engineer with expertise in Generative AI, MLOps, and large-scale data science solutions. Proven track record of delivering AI-augmented platforms and automation solutions that save significant operational costs and work hours.

## WORK EXPERIENCE

### Senior AI Engineer

September 2024 - Present

Cigna

- Spearheading the development of a Generative AI-augmented Prior Authorization platform, focusing on Agentic AI systems, RAG pipelines, seamless platform integration, and robust ML-Ops pipelines.
- Orchestrating cross-functional teams to deliver scalable AI solutions for internal AI platforms, ensuring high performance, reliability, and compliance in medical care workflows.

### AI Engineer

October 2023 - August 2024

Walmart

- Developing Generative AI based automation solution that carries out exploratory Data analysis on complex data types simply based on voice/text commands, removing the learning curve for non-programmers to use analytical tools, in some cases removing the need to build dashboards. Saved 130,000 associate work hours per week.
- Delivered end-to-end automation solution for extracting item attributes and competitor using a RAG system (Retrieval Augmented Generation) to generate structured usable data – in contrast to a legacy system based on manual annotation – achieved 80% in cost savings and over 24 times improvement in turnaround time.
- Lead ML Engineering - containerization (Docker, configuring Kubernetes and deploying API endpoints in tandem with frontend solutions - enforcing high standards for quality, reliability, and security in deployed machine learning solutions.

### Data Scientist

January 2022 - October 2023

Walmart

- Deployed and managed large-scale anomaly detection engine with into production with real-time user feedback, providing upwards of 70% capture rate.
- Achieved > 80% explained variance and less than 5% global error by contributing to a novel causal-inference forecast model, helping make around \$1.6 Billion worth of sales, more explainable and interpretable.
- Contributed to building a Rest API solution and optimized runtime on deployment on Azure cloud with best CI/CD practices.
- Conducted PoCs for Gen AI use-cases such as automated competitor prices mining tool, text-based interface for forecast observation (as an alternative to dashboard)

### Data Science Associate

June 2018 - December 2021

ZS Associates

- Deployed a product with favorable client feedback and improved performance in the form of a cross platform application.
- As part of the project, utilized Python libraries, Deep Learning frameworks and transformer models to implement a Natural Language Inference pipeline, i.e., extracting domain-relevant inferences from textual data (news articles, publications, etc.).
- Deployed a novel ML based solution for marketing strategy planning with 60% more projected efficiency on target reach and market penetration ROI, using multivariate time series models and Linear Optimization.

### Research Engineer

January 2020 - May 2021

Indiana University - Bloomington

- Building a Mind Lab: Designed and implemented pipelines to successfully conduct experiments as part of NSF funded project under the guidance of Professor Justin Wood. The project involved working across topics in Computer Vision and Deep Reinforcement Learning.
- IUPUI Data Lab: Conducted research and experiments in Natural Language Processing models and architectures towards a successful end to end process from ideation to eventual publication under the guidance of Prof Sunandan Chakraborty.
- Kelley School of Business: Successfully deployed an MLOps pipeline starting from a PoC formulation to a GUI dashboard using Big Data libraries and cloud-based parallel computation.

EDUCATION

Master's, Data Science August 2019 - May 2021  
Indiana University - Bloomington

PROJECTS

Generative AI Prior Authorization Platform 2024

- Developed Agentic AI systems with RAG pipelines for healthcare workflow automation
- Integrated ML-Ops pipelines ensuring compliance in medical care processes

Voice/Text-Based Data Analysis Automation 2023-2024

- Created Generative AI solution for exploratory data analysis via natural language commands
- Eliminated learning curve for non-technical users, saving 130,000 work hours weekly

RAG-Based Item Attribute Extraction 2023

- Built end-to-end automation for competitor analysis using Retrieval Augmented Generation
- Achieved 80% cost savings and 24x improvement in turnaround time vs manual annotation

SKILLS

**Programming Languages:** Python, R, SQL

**AI/ML Technologies:** Generative AI, Machine Learning, Deep Learning, MLOps, RAG Systems, TensorFlow, PyTorch, Transformers, NLP, Computer Vision

**Cloud & Infrastructure:** Azure, AWS, GCP, Docker, Kubernetes, CI/CD, REST APIs

**Data Science:** Statistical Analysis, Time Series, Causal Inference, Anomaly Detection, Multivariate Analysis

**Specialized AI:** Agentic AI Systems, RAG Pipelines, Prior Authorization AI, Voice/Text Analytics, Automated Data Analysis