

Sirichandana Bomma

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# Professional Summary

Data Scientist with **3.5 years of experience** applying advanced analytics, machine learning, NLP, and generative AI to deliver business impact across healthcare, SaaS, and finance domains. Skilled in **Python programming and scripting**, building data pipelines, and applying **LLM-based solutions** to extract insights from structured and unstructured data. Experienced in deploying predictive models on **Azure ML, Databricks, and AWS SageMaker**, ensuring scalable and production-ready delivery. Strong background in **data visualization** with PowerBI, Tableau, and Streamlit to communicate insights and accelerate decision-making.

# Skills

**Programming & Scripting:** Python, Python Scripting, SQL, Bash, .NET, PostgreSQL, MySQL, MongoDB, BigQuery

**Data Engineering & Processing:** ETL/ELT Pipelines, PySpark, Dask, Airflow, Delta Lake, Data Modeling, Feature Engineering

**AI/ML & GenAI:** Machine Learning (Supervised & Unsupervised), NLP (spaCy, Hugging Face), LLMs (OpenAI APIs, LangChain, LangGraph), Generative AI Pipelines, MLflow, Predictive Modeling

**MLOps & Deployment:** MLflow, Docker, Kubernetes, FastAPI, Flask, REST APIs, AWS SageMaker, Azure ML, CI/CD Pipelines

**Visualization & BI Tools:** Tableau, Power BI, Streamlit, Plotly, Matplotlib, Seaborn — Interactive dashboards, KPI tracking, Executive reporting

**Cloud Platforms:** AWS, Azure, Databricks, Snowflake (familiar), GCP

**Automation & Optimization:** Workflow Monitoring, Data Validation, CI/CD, Python Scripting for Automation, DVC, Performance Tuning

# Experience

## Spok Inc Jul 2024 – Present

*Data Scientist McKinney, TX*

* Designed and deployed generative AI pipelines integrating **LLMs (OpenAI, Hugging Face)** with structured data, cutting query resolution time by 40%.
* Built end-to-end data pipelines in **Python, PySpark, and Airflow**, increasing ingestion throughput by 45% and lowering latency for healthcare analytics.
* Engineered **Python scripting solutions** for automation of ETL processes, reducing manual intervention by 30%.
* Developed and fine-tuned **NLP models** for clinical text processing, improving entity extraction and classification accuracy by 25%.
* Implemented Retrieval-Augmented Generation (**RAG**) pipelines and integrated **AI Agents (LangChain, LangGraph)** to automate compliance checks, reducing workload by 40%.
* Created **visualization dashboards** with PowerBI and Streamlit, enabling leadership to monitor KPIs and make data-driven decisions 30% faster.
* Deployed ML and GenAI models in **AWS SageMaker** with HIPAA compliance, ensuring secure and production-ready delivery.
* Authored technical documentation, conducted knowledge transfer, and mentored offshore teams, accelerating onboarding by 50%.

## Signify Health May 2023 – Jun 2024

*Data Scientist Dallas, TX*

* Built ML-integrated pipelines in **Python and Databricks** for patient risk scoring, improving predictive accuracy by 20% and reducing care gaps.
* Automated healthcare data workflows using **Python scripting and Airflow**, reducing reporting delays by 35%.
* Designed **NLP pipelines** for extracting medical entities from EHR text, achieving 92% accuracy in clinical data enrichment.
* Migrated legacy workflows to **Azure ML pipelines**, reducing deployment cycles from weeks to 3 days.
* Applied anomaly detection techniques in **PySpark and MLlib**, reducing false positives in analytics by 35%.
* Built preprocessing frameworks for large-scale EHR datasets, lowering reporting time by 30% and ensuring ML model readiness.
* Delivered **PowerBI dashboards** that visualized patient risk and compliance trends, cutting review time by 25%.
* Collaborated with clinical teams to transform raw data into compliance-ready insights, improving operational efficiency across healthcare programs.

## Zensar Technologies Limited Mar 2022 – Jul 2022

*Junior Software Engineer Hyderabad, India*

* Developed **.NET utilities** to automate financial reporting, reducing manual workload by 25%.
* Enhanced legacy .NET applications with optimized data access layers, improving response times by 20%.
* Collaborated with QA and support teams to resolve production defects in .NET services, ensuring 99% uptime.

## VITA Technologies Aug 2021 – Feb 2022

*Software Engineer Intern – Data Engineering & AI/ML Warangal, India*

* Designed proof-of-concept ETL pipelines with Python/SQL, improving client onboarding efficiency by 25%.
* Applied clustering and dimensionality reduction techniques for churn analysis, generating actionable retention insights.
* Built AWS Lambda serverless workflows for near real-time analytics, reducing reporting latency significantly.
* Developed **Streamlit** annotation and visualization tools, increasing labeling throughput by 4x and accelerating model training.

# Key Projects

**AgentFabric – Autonomous Multi-Agent Research Assistant Prototype:** [https://agentfabric-etazidrjdbpq4ccc3mmqun.streamlit.app//](https://agentfabric-etazidrjdbpq4ccc3mmqun.streamlit.app/)

* A collaborative AI framework where multiple specialized agents work together to automate research and analysis tasks, significantly reducing manual effort and accelerating insights.

## RAGChain – Contextual Document Retrieval & QA Assistant

* An AI-powered system that combines retrieval-augmented generation with scalable pipelines to provide precise answers from large document sets, improving knowledge access and decision support.

**MedAgent – Healthcare Compliance & Regulation Summarizer Prototype:** <https://medagent-3pudaugc7v2ayxychv6ecn.streamlit.app/>

* A healthcare compliance assistant that automatically processes and summarizes lengthy regulatory documents, helping professionals cut review time by more than half while ensuring accuracy.

# Education

**Master of Science Information Science** *(2022-2024)*

University of North Texas *3.7 GPA*

## Bachelor of Technology Computer Science & Engineering *(2017-2021)*

JNTU Hyderabad, India *3.4 GPA*

# Certifications

* [AI in Healthcare – Stanford University](https://www.coursera.org/account/accomplishments/specialization/certificate/Z1IU4R4OQ6XU)
* [AI Agent Developer – Vanderbilt University](https://www.coursera.org/account/accomplishments/specialization/certificate/TQH24MXKYCSJ)
* [Salesforce Certified AI Associate](https://thc-public-files-nonproduction.s3.amazonaws.com/th-profile/credentials/sf-certs/sf-cert-AI-Associate.zip)
* [IBM Certified Machine Learning Developer](https://www.coursera.org/account/accomplishments/professional-cert/certificate/151Z8K8N9BL6)
* [Prompt Engineering – Vanderbilt University](https://www.coursera.org/account/accomplishments/specialization/certificate/2G59JDQSAG1S)
* [Certified Kubernetes Application Developer (CKAD)](https://www.coursera.org/account/accomplishments/specialization/certificate/AUZPLN8R86TJ)
* [IBM Certified Enterprise Design Thinking Practitioner](https://www.credly.com/badges/d64ae444-07bf-402e-9601-0629eaf48182/linked_in_profile)
* [IBM Enterprise Design Thinking – Team Essentials for AI](https://www.credly.com/badges/3fd632e9-7ea1-43d9-b1b0-0f730461212f/linked_in_profile)
* [Data Science with Python – SimpliLearn](https://certificates.simplicdn.net/share/3447654_1652387795.pdf)
* [Large Language Models – SimpliLearn](https://www.simplilearn.com/skillup-certificate-landing?token=eyJjb3Vyc2VfaWQiOiIzODA4IiwiY2VydGlmaWNhdGVfdXJsIjoiaHR0cHM6XC9cL2NlcnRpZmljYXRlcy5zaW1wbGljZG4ubmV0XC9zaGFyZVwvNzU2MTMzN18yMTU3ODk4MTczMTYxMDc1MDQxOC5wbmciLCJ1c2VybmFtZSI6IlNpcmljaGFuZGFuYSBCb21tYSJ9&utm_source=shared-certificate&utm_medium=lms&utm_campaign=shared-certificate-promotion&referrer=https%3A%2F%2Flms.simplilearn.com%2Fcourses%2F6751%2FIntroduction-to-Large-Language-Models%2Fcertificate%2Fdownload-skillup&%24web_only=true&_branch_match_id=1357726406963667776&_branch_referrer=H4sIAAAAAAAAA8soKSkottLXL87MLcjJ1EssKNDLyczL1k%2FVN6sIDk2xrMx3D0iyrytKTUstKsrMS49PKsovL04tsvUBqkpN8cwDAG06HRRBAAAA)
* [Generative AI – SimpliLearn](https://www.simplilearn.com/skillup-certificate-landing?token=eyJjb3Vyc2VfaWQiOiIzODA3IiwiY2VydGlmaWNhdGVfdXJsIjoiaHR0cHM6XC9cL2NlcnRpZmljYXRlcy5zaW1wbGljZG4ubmV0XC9zaGFyZVwvNzcxNjM0MV8yMTU3ODk4MTczNTM0ODM1ODAzNi5wbmciLCJ1c2VybmFtZSI6IlNpcmljaGFuZGFuYSBCb21tYSJ9&utm_source=shared-certificate&utm_medium=lms&utm_campaign=shared-certificate-promotion&referrer=https%3A%2F%2Flms.simplilearn.com%2Fcourses%2F6750%2FIntroduction-to-Generative-AI%2Fcertificate%2Fdownload-skillup&%24web_only=true&_branch_match_id=1357726406963667776&_branch_referrer=H4sIAAAAAAAAA8soKSkottLXL87MLcjJ1EssKNDLyczL1k%2FVrwwzz%2FF2Ms93D0iyrytKTUstKsrMS49PKsovL04tsvUBqkpN8cwDAF40pb5BAAAA)