

Souvik Nayak

Decision Science Consultant



Personal details



Souvik Nayak



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Skills

Generative AI	●●●●●
Azure	●●●●●
Python	●●●●●
SQL	●●●●●
Azure Data Factory	●●●●●
NLP	●●●●●
Natural Language Processing	●●●●●
ML-Ops	●●●●●
Data Visualization	●●●●●
Analytics	●●●●●
Databricks	●●●●●
Tableau	●●●●●
Database	●●●●●

Profile

- 5 years experienced, meticulous & result oriented consultant in and Data Engineering and Data Science domain. Expert armed with an analytical acumen in econometric modeling, algorithm development, data engineering & machine learning methodologies.
- Possesses a proven track record of setting up the data science function for a leading oil & gas firm, in addition to rendering consultancy services for a Fortune 500 company.
- Proficient in creating Big Data Engineering Pipeline using Azure Data Factory, Databricks, Azure Synapse Analytics, Azure ML Studio
- Proficient in deploying multiple algorithms and techniques like sentiment analysis, generative AI etc. to create products that deliver a direct impact on the bottom line of organizations.

Education

PGP in Artificial Intelligence and Machine Learning

Jul 2020 - Apr 2021

NIT Warangal, Warangal

CGPA: 3.7 / 4

An online post-graduation program for working professionals

MCA

Jul 2017 - Apr 2019

Vellore Institute of Technology Vellore, India

CGPA: 8.69 / 10

Full Time Masters/Post-Graduation

BCA

Jun 2014 - Jun 2017

West Bengal University of Kolkata, India

CGPA: 7.94 / 10

Full Time Graduation

Employment

Ind&Func AI Decision Science Consultant

Nov 2021 - Present

Accenture Applied Intelligence, Bengaluru, India

Consulting Overview:

Initiative:

PPA Advisor

(Generative AI + Azure)

Background: Recently Accenture is aiming to create assets in the organization using Gen AI. Our department wanted to get the first mover advantage.

Initiative: Developed power purchase agreement analysis system using Gen AI to efficiently understand terms and condition and compare better business value in several PPA.

Outcome:

This was demoed to top managements in Accenture and was selected as a killer demo.

Techstack: Streamlit + Azure Open AI(Text-ada-002 & GPT 3.5 Turbo + Langchain)_ Docker + Azure Container Apps.

Project:

Microsoft SQL Server	●●●●●
Power BI	●●●●●
Cloud	●●●●●
Pyspark	●●●●●
Logistic Regression	●●●●●
data engineering	●●●●●
machine learning	●●●●●
Azure Devops	●●●●●
Alteryx	●●●●●
Adobe Analytics	●●●●●
AI	
Data Mining	
Data Extraction	
SQL-Server	
multivariate regression	
pandas	
Pareto Chart	
Principle Component Analysis	
SQL Queries	
sentiment analysis	
Hypothesis testing	
stemming	
Text Mining	
Topic modeling	
T-SQL	
Web Analytics	
analytical	
meticulous	
decision-making	
Python Libraries: Pandas, numpy, sklearn, tqdm, plotly, matplotlib, seaborn, etc	

HESS Chatbot/Knowledgebot

Based on the previous POC we onboarded HESS Chatbot project.

Here we implemented:

- 1) Vector database embedding with Azure Redis Cache.
- 2) Implemented Azure Form Recognizer for better understanding of unstructured data (Ex: RACI table)
- 3) Implemented ROUGE and BLEU score to assess the coherence of the overall LLM model
- 4) Deployed the solution on Azure web app.
- 5) Deployed the backend code into Azure function.

POC:

(Generative AI + Azure)

Client: NG (A energy supply company)

Background: Client was facing issues to update user on power outage information in real time

Solution: Developed a demo chatbot within a single day using Azure Cognitive services and Generative AI to initiate and get the SOW signed.

Outcome: This demo was appreciated internally and by the client.

Techstack: Django + Python + Azure Container Apps, + Docker + Azure Speech Services

PVA Based Knowledgebot

Client: A renowned energy company

Background: A giant energy supplier DTE wanted to create a knowledge bot which can help its customer with real time information related to various issues in energy supply chain.

Solution: Accenture came to streamline the solution with the help of Azure Open AI (GPT 3.5 Turbo 16K), Form recognizer, LLM modes(LLama 2 index/Langchain models). Also the solution was compared using existing legacy chatbot responses. Applied fine tuning to improve the response.

Techstack used: **Django+HTML CSS, Python, Azure Open AI, Azure Container Apps, Docker, Form Recognizer Redis, Azure Cognitive Service**

Labour-hour prediction with Azure:

Client: Renowned Japanese Tractor Manufacturing Company

Industry: Oil & Gas

Background:

To address the issues of entering wrong job code by Dealers and predicting correct labour-hour. Accenture Built a ML-based platform to help the tractor company to reduce the number of anomalies.

- Created functions for extrapolation of the data
- Applied Catboost algorithm and fined tuned
- Developed Data Engineering pipelines with data-factory
- Implemented python based Azure function to call ML model through API.
- Implemented ML-Ops to deploy the solution across environments

Production Optimization with Azure:

Client: A renowned Paper Company

(Tech: Azure Data Factory, Azure Databricks Azure Devops, Python, Py Spark & SQL)

Background: IP is a paper company which is serving packaging boxes to several renowned companies like Dominos, Amazon etc. for their courier packages.

Problem:

There was a challenge to efficiently allocate order to all the plant available across different region for IP.

Solution:

Accenture came up with a solution to optimize the production line with a optimization algorithm. The whole solution was cloud based and this helped to save more than 20 million dollars to IP.

My Role:

- Played a techno functional role in this project.
- **Technical:** Built the data engineering pipeline and several EDA and extrapolation scripts in python and Py spark in data bricks, developed data engineering pipelines in Data factory, deployed ML-Ops with Azure Dev-ops code.
- **Functional:**
 1. Collaborated with cross functional team to effectively build the value chain.
 2. Brainstormed several business strategies for better optimization and getting business value.
 3. collaborated with different stakeholders and client to align with business composition.
 4. Mentored interns to solve their challenges.

Analyst

Jun 2019 - Nov 2021

Deloitte US India, Bengaluru, India

Clients: Deloitte Consulting, Deloitte Audit, Deloitte Tax

Industry: Internal/Shared Services

- Create, Delete and update database in Microsoft SQL Server as per the requirement.
- Creating SQL Queries with window function, Grouping, Joins , Union, Window function etc. **Data Visualization & Business Intelligence** (Used Tableau)
- Deploying rich graphical visualizations in dashboards to create effective views of data such as: **Line Charts, Bar Charts, Pie Charts, Scatter Plots, Histograms, Tree Maps, Heat Maps, Area Charts, Gantt Charts, Bullet Graphs, Pareto Chart in Tableau Desktop**
- Implementing advanced Tableau features such as parameters, table calculations, sets, groups, user filters to deliver highly usable dashboards Highlighting views by using Annotations (Points, Marks, Area, etc.) wherever required
- **Creating different KPIs** using calculated key figures and parameters
- Creating Tableau Dashboards with interactive views, trends and drill downs
- **Implemented Topic Modeling with LDA Algorithm to identify top ideas for innovation network team Implemented Natural Language Processing (NLP) using lemmatization , stemming, tokenization to find top utterances .**
- Tested and implemented decision trees, random forests and ensemble models via bagging and boosting Data Management & Data Mining

Intern

Jan 2019 - Jun 2019

Deloitte US India

- Built an NLP - based framework to help the technical team to generate a weekly report of user issue and incident.
- Amalgamation of data from various data sources and preprocessing in Alteryx.
- Developed Tableau Dashboards for various business needs.

Certificates

Microsoft Certified Data Engineer

Aug 2022

DP-203 Microsoft Data Engineer Certified. Focused Skills: Azure Data Factory, Azure Synapse Analytics, Azure DataBricks, Pyspark Big Data

Azure Fundamentals

Jun 2022

Azure Fundamentals certified. Focused skills: Basic Azure Storage, Azure Resource Group, Authentication systems, Azure Service Principals and managed identity management.

SAFe Agile Certified

Jun 2020

Tableau Desktop Certified Associate (Edureka)

Advanced Tableau Visualizations, Pareto Chart, Gnatt Chart, Waterfall Chart, Box Plot, Churn Analysis etc.