

ASHWINI KASTURE

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SUMMARY

- A dedicated and accomplished AI engineer for 8 years with a demonstrated history of success in machine learning, deep learning, cloud based model deployment using AWS and Azure, NLP, LLM, data science.
- Adept in building business intelligence pipelines for visualization of business insights in Tableau, PowerBI.
- Experienced in deploying and managing scalable, containerized applications using Kubernetes for seamless orchestration.
- Built, tuned, and deployed inbound call prediction machine learning model by using XGBoost Python, reducing data processing by **90%** which was done in Excel.

TECHNICAL SKILLS

Cloud: AWS, Google Cloud Platform, Azure, Kubernetes

Databases: MS SQL, Snowflake, Hadoop

Scripting: SAS, Python, R, SQL, Hive, C, Spark

AI: LLM, Hugging Face, Transformer models, knowledge graphs, prompt engineering

Project Management: Agile, Atlassian Jira

Tools: Databricks, MLflow, Tableau, Power BI, Jenkins, GIT, RESTful API

Other: Cross team collaboration, stakeholder management, Machine learning algorithms

Libraries: Scikit-learn, Keras, Tensorflow, PyTorch, Matplotlib, SciPy, NLTK

Collaboration & Communication: Proven ability to collaborate with stakeholders and deliver clear, actionable presentations.

EXPERIENCE

NAVIENT, Indianapolis, Indiana

Data Scientist II, May 2022 – Current

- Led building and tuning, and deploying complex inbound call prediction machine learning model by using XGBoost Python, reducing manual data processing by **90%** which was done in Excel. The model is used to predict Inbound calls on daily and 15 min intervals which improved business processes providing value to internal customers.
- Effectively collaborated with the cross functional teams for the above project to identify key business needs and translating requirements into business strategies. Presented findings and performance metrics.
- Monitored and maintained machine learning models in production, ensuring performance consistency and automating model retraining based on real-time metrics.
- Engineered high-quality datasets through data exploration, mining, preprocessing, and feature engineering for model training, improving model accuracy by **15%**.
- Developed document search model using LLM Llama2 in AWS Sagemaker environment for fast searching and summarizing the knowledge repository of Navient, saving **\$50M** in hours of manual work.
- Optimized and fine-tuned large language models (LLMs) for NLP tasks, achieving a **20%** reduction in inference time and a **15%** accuracy improvement in entity recognition.
- **Developed and fine-tuned LSTM models using PyTorch for time-series forecasting and sequential data analysis, optimizing performance through hyperparameter tuning.**
- Mentored junior team members, fostering growth and ensuring best practices in model development and deployment.

PERATON (client of Apex Systems), Remote**Data Scientist, August 2021 - April 2022**

- Developed ETL processes to streamline data ingestion, ensuring data quality and consistency across pipelines.
- Maintained model evaluation metrics and tracked programming efforts by using MLflow, streamlining MLflow and Leveraged H2O AutoML for automated model tuning, increasing programming efficiency.
- Managed fraud protection inputs and KPIs through dashboard and UX interface, resulting in 40% savings in transactions. Created and tested Azure CI / CD pipeline and data curation / preparation.
- Led efforts to improve back-end infrastructure, optimizing data storage and retrieval processes, reducing data latency by **30%**.
- Developed machine learning models for improving automated issue detection accuracy by **25%** and to enhance fraud protection systems, reducing false positives and safeguarding critical transactions.

Tata Consultancy, Worked in Agile/Scrum environment by taking the ownership from product manager.

Client: Home Depot: Data Scientist**Oct 2020-July 2021**

- Analyzed and investigated complex data sets (data audits) and summarized using Z-score, IQR, Std Deviation and spot anomalies improving sales by **30%**.
- Ensured the integrity and quality of datasets, enabling high-accuracy model predictions.
- Created actionable data visualizations(dashboards) and reports to help business stakeholders identify opportunities for process improvement, enhancing promotional effectiveness by **20%**.
- Implemented Recommendation systems for driving data-driven decision-making and optimizing model accuracy for inventory management and customer behavior forecasting.
- Collaborated with cross-functional teams to define and track success metrics for strategic initiatives.

Client: Cummins: Data Scientist**April 2020-September 2020**

- Developed detailed problem statement for Machine failure hypothesis and its effect on target customers defining model's scope, objective, outcome statements and metrics.
- Detected and interpreted emerging product quality issues faster by training and tuning a moving average algorithm, saving **\$50M** on warranty.
- Devised Text Analytics and NLP techniques NLTK library, for sorting out customer complaints (lemmatization and polarity score) , improving satisfaction rate by **40%**.
- Lowered the cost of repair by **25%** by generating various metrics and signals based on them.
- Collaborated with cross-functional teams to define and track success metrics for strategic initiatives.

Client: PNC Bank: Data Analyst**January 2019-March 2020**

- Led, developed, and implemented data lake (by ingestion), resulting in 50% increase in data accessibility in Hadoop.
- Automated with programming macros and SAS analytics for credit card data loan servicing dept to increase efficiency by **80%**.
- **Developed deep learning neural network in Python, Computer vision, TensorFlow for fraudulent signature identification on deposit checks, saving \$60M in transactions.**
- Masked personal identifiable information in the Hadoop and Python ecosystem, securing transaction processing.
- Delivered actionable insights through dashboards and KPI tracking, driving strategic improvements.
- Improved data governance frameworks, emphasizing quality assurance and integrity management.

CERTIFICATIONS : *Microsoft Certified Professional, SAS Certified Professional, SAFE DevOps Practitioner*

EDUCATION

NORTHWESTERN UNIVERSITY, Chicago, Illinois 2018

M.S., Predictive Analytics

PUNE UNIVERSITY, Maharashtra, India

M.B.A., Marketing Management

PUNE UNIVERSITY, Maharashtra, India

B.S., Statistics and Math