

# Yashi Shukla

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## SKILLS

**Languages:** Python (Pandas, NumPy, Scikit-learn, TensorFlow, PyTorch, Prophet), R, SQL

**Machine Learning:** Forecasting, Optimization, Regression, Classification, NLP, Generative AI.

**Databases:** MySQL, PostgreSQL, Teradata, Oracle, DynamoDB, Cassandra, Neo4j, MongoDB, BigQuery.

**Cloud & Development:** AWS, GCP, Azure, Git, Docker, GraphQL, Dask, Apache Spark, Hadoop, Snowflake, ServiceNow, DataDog.

**Data Visualization & Analysis:** Tableau, PowerBI, Streamlit, Plotly, Matplotlib, Ggplot, Splunk.

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## EXPERIENCE

### Discover Financial Services

#### Application Engineer (Data Science)

Jul 2024 – Present

- Spearheaded a **predictive analytics** project for three payment networks, accurately **forecasting peak periods** and enhancing strategic capacity planning with a **15% increase** in accuracy.
- Developed and automated **Tableau** dashboards integrated with SQL databases to streamline application **performance analytics** which facilitated real-time decision-making and operational improvements.
- Actively collaborated with both **technical** and **non-technical stakeholders** to align analytics strategies with business objectives.

### University of California San Diego Health

#### Student Research Engineer

Apr 2023 – Sep 2023

- **Streamlined data collection** to enhance efficiency and accuracy in behavioral studies, **reducing manual intervention by 80%**.
- Conducted **comprehensive data analysis** to identify critical behavioral patterns and insights related to drug addiction research.

### Accenture

#### Data Scientist

Oct 2020 – Aug 2022

- Deployed an **ML-based pricing solution** for 8 customer groups that **optimized discounts and inventory levels**, resulting in a **20% increase in sales**.
- Built an **AI solution** to **predict** fabric & style performance, enhancing design and purchasing strategies while reducing waste.
- **Forecasted commodity prices** for up to six months with **96% accuracy** to help businesses create an efficient purchase plan.
- **Optimized transportation routes** along with Vendor and Rate Contract Analysis, resulting in **cost savings of \$25 million** annually.

### Accenture

#### Data Analyst

Jun 2018 – Sep 2020

- Led the development of a **Vendor Management** and **Inventory Optimization** solution, improving operational efficiency by 20%.
  - Designed scalable data infrastructure and developed **data pipelines** to **process real-time data**, increasing efficiency by 30%.
  - Developed core algorithms for a native product to **detect anomalies** and conduct **root cause analysis** associated with anomalies.
  - Engineered an interactive Spend Analytics Solution to **evaluate and monitor 20+ KPIs** to identify optimization opportunities.
  - Created an **analytics dashboard** to track and analyze performance, spending, and consumption metrics for **1500+ commodities**.
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## ACADEMIC PROJECTS

### Explainable Artificial Intelligence for Audio Analysis

- Leveraged Layer-wise Relevance Propagation (LRP) to enhance the interpretability of audio classification deep neural networks.
- Generated both visual and audible explanations, making Deep Neural Network decisions more transparent and understandable.

### Genetic Ancestry Analysis using Neural Networks based AutoEncoder Model

- Built a neural network-based autoencoder model to accelerate genomic clustering, significantly improving runtime efficiency.
- Achieved up to 10x increase in computational speed when benchmarked against the traditional ADMIXTURE software.

### Sample-Integrated Prompt Engineering using Autoregressive LLM

- Enhanced output quality of an Autoregressive LLM through dynamic integration of training data and human-generated prompts.
  - Capitalized on the strengths of lower-capacity models for faster inference, significantly improving prompt engineering capabilities.
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## EDUCATION

### University of California San Diego

Sep 2022 – Jun 2024

#### Master of Science, Data Science

GPA: 3.9

Probability & Statistics, Statistical Models, Machine Learning, Data Science in Biomedicine, Computer Vision, Scalable Data Systems, Data Mining, Data Ethics & Responsible AI, Statistical NLP, Explainable AI, Data Visualization, NoSQL

### Bharati Vidyapeeth University

Jul 2014 – Jun 2018

#### Bachelor of Technology, Information Technology

GPA: 9.5

Data Structures and Files, Database Management, Design & Analysis of Algorithms, Neural Networks, Distributed Computing

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