ADITYA N BHAVSAR

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👷 SUMMARY

Data scientist with expertise in machine learning, NLP, and cloud computing, specializing in building scalable AI-driven solutions. Experienced in designing scalable platforms, optimizing data workflows, and deploying production-ready models. Skilled at translating complex data into actionable insights to drive efficiency and innovation. Currently pursuing a master's in data science at Pace University, focusing on advanced analytics and real-world AI applications.

📝 EDUCATION

Pace University, Seidenberg School of Computer Science and Information Systems	*New York*
Masters in Data Science	GPA: 3.95	*Dec 2025*

Coursework: Machine Learning & AI, Natural Language Processing, Big Data & Cloud Computing, Data Engineering & MLOps

💼 PROJECTS

Electricity Consumption Forecasting for NYC (2010–2023)
Tools: Python, Pandas, Prophet, Matplotlib
- Built a time series forecasting pipeline to analyze and predict municipal electricity usage at daily, monthly, and annual levels.
- Fine-tuned **Facebook Prophet models**, incorporating changepoint detection and custom seasonality, achieving **R^2 = 0.88, MAE = 150 KWh, MAPE = 10%**.
- Visualized consumption trends and anomalies to assist in peak-load prediction and sustainable resource planning.
- Delivered a high-accuracy prediction system enabling proactive energy policy decisions.

Text-to-SQL Query Application Using GenAI
Tools: Python, Streamlit, SQLite, Google Gemini Pro
- Built an NLP-driven application to convert natural language queries into accurate SQL statements with **90%+ accuracy**.
- Designed and populated a student database schema in SQLite for dynamic querying.
- Integrated a real-time **Streamlit** UI for seamless input and visual feedback.
- Automated query generation and retrieval, demonstrating accurate performance across varied user prompts.
- Delivered a highly intuitive tool that bridges natural language and databases — showcasing the power of combining GenAI with relational databases.

Duel Agent Conversation Simulator Using LLaMA-3 & Streamlit (link)
Tools: Python, Streamlit, LLaMA-3 (via Together API), Pandas
- Developed an interactive multi-agent simulation powered by **Meta's LLaMA-3**, emulating a dynamic AI-led interview involving five distinct personas: Interviewer, Interviewee, Judge, Humorist, and Statistics Guru.
- Engineered a **modular role-based feedback loop**, where each agent contributed unique context—posing questions, evaluating responses, injecting humor, and offering statistical analysis—driving iterative improvement.
- Designed and implemented a custom call_llama() wrapper for seamless integration with the **Together API**, enabling **context-aware prompt handling** and scalable persona simulation.
- Built an intuitive **Streamlit interface** allowing users to select topics, launch conversations, and explore role-based interactions via expandable summaries.
- Automated simulation logic with **performance scoring and dynamic flow control**, allowing the Judge persona to evaluate responses and determine interview completion based on feedback thresholds.

🚀 WORK EXPERIENCE

JAB Systems

Software Developer   *Jan 2014 – Dec 2016*
- Revamped high-traffic company websites, improving user experience and optimizing performance, resulting in higher customer retention and business growth.
- Identified and resolved critical SEO issues; implemented advanced strategies (keyword optimization, meta-tag enhancement, structured content) leading to a **30% increase in organic search traffic**.
- Conducted deep user behavior analysis using Google Analytics; improved navigation and page layout to reduce bounce rate by **15%**.
- Collaborated with design and content teams to introduce engaging site features, boosting average session duration by **25%**.
- Engineered scalable, robust solutions using **HTML, CSS, JavaScript, PHP**, maintaining **99.9% uptime** and reducing turnaround times by **40%**.

Balsam Developers

Data Analyst   ***Jun 2017 – Jun 2019***

- Spearheaded data-driven initiatives to enhance project execution across departments, aligning technical strategies with business goals.
- Served as primary analyst in cross-functional teams, translating client requirements into actionable insights.
- Built predictive models and project dashboards, including risk assessments and tracking systems, improving stakeholder transparency.
- Conducted in-depth market and competitive analysis using **Python, SQL, Tableau**, and statistical modeling, directly influencing executive strategies.
- Contributed to a **20% revenue increase** by identifying new market opportunities and optimizing offerings. Improved project efficiency by **15%** through continuous data monitoring and insights.

🛠️ TECHNICAL SKILLS

Data Engineering: Python (Pandas, NumPy, Scikit-learn, TensorFlow, PyTorch), R (ggplot2, dplyr), SQL (MySQL, PostgreSQL), MongoDB.

Data Visualization: Excel (VBA, pivot tables), Power BI, Tableau, Matplotlib, Seaborn, Plotly.

Machine Learning: Supervised/unsupervised learning, deep learning (CNNs, RNNs), NLP (spaCy, Hugging Face), model optimization, MLOps, Generative AI (ChatGPT, fine-tuning models), Reinforcement Learning, Edge AI.

Big Data & Cloud: AWS (S3, EC2, SageMaker & 30+ services), Apache Spark, Docker, Kubernetes.

Dev ops: ETL pipelines (Airflow, SQL), APIs, Git, CI/CD.

Statistics & Experimentation: A/B testing, hypothesis testing, time series (ARIMA, Prophet).

📜 CERTIFICATIONS

AWS – (Cloud Practioner) *Credential Verification | CertMetrics*

IBM BigData - *IBM BD0101EN Certificate | Cognitive Class*

Python – *Udacity*

R for analytics – *Great Learning*

 Machine Learning – *Udemy*

Practical SQL bootcamp - *Udemy*