

Aanya Sharma (she/her/hers)

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Graduate with a strong foundation in Computer Science and Mathematics complemented by one year of hands-on technical experience. Seeking full-time Data Scientist roles in the US, across industries and cities. Legally authorized to work in the US via STEM OPT.

EDUCATION

University of Texas at Austin, McCombs Business School
Post Graduate Program in Data Science and Business Analytics

January- December 2024
GPA 4.00

University of California, San Diego, CA, USA
Bachelor of Science in Mathematics & Computer Science | Minor: Data Science

June 2021 - December 2024
Major GPA 3.85

WORK EXPERIENCE

Prime AI LLC, Carnegie Mellon University, Pittsburg, PA

January – April 2025

Deep Learning Researcher at Language Technologies Institute

- Conducting research on **LLM compression techniques**, leveraging **quantization**, **pruning**, and **knowledge distillation** to improve model efficiency while preserving performance.
- Developing deep learning models, including building a **custom PyTorch toolkit**, implementing a **face verification system** with a **2% error rate**, and designing **automatic speech recognition (ASR) models** using **LibriSpeech** and **Transformer-based architectures**.
- Training and optimizing **generative AI models**, implementing **diffusion-based techniques** to improve image generation quality, enhance inference speed, and refine outputs using **advanced optimization strategies** for real-world applications.

Skills: Neural Networks, LLM, Model Optimization & Compression, Generative AI, Diffusion Models, Kaggle Competitions

Scotiabank, New York, USA

May - August 2023

Commodities Derivatives Technology Intern

- Developed a Commodities Derivatives Management dashboard** hosted on **Azure** by utilizing **SQL & Java** to improve real-time trade processing efficiency by 30% and enhancing data-driven decision-making for traders.
- Automated deployment** processes using **CI/CD tools** like **Jenkins** and **Azure DevOps**, reducing deployment time by 25%.
- Configured auto-notifications** for real-time and EOD failed-trades for Enhanced trade monitoring driving reduction in operational errors.
- Participated in **Agile Scrum** planning, collaborating with **Business Analysts, DevOps, and QA** teams in a complete sprint cycle hosted on **Jira**.
- Gained exposure to key **regulatory** terms such as **SACCR, CCAR, RWA**, and **derivatives** including futures, swaps, and options.

Skills: Python, SQL, Derivatives, Capital Markets, Regulatory Reporting, CI/CD, Agile Methodologies.

Glorious Insights, Noida, India

February- April 2023

Data Analyst Intern

- Designed and implemented scalable **Python pipelines** for **data integration** and **analysis**, enhancing processing efficiency by 40%.
- Designed **RESTful APIs** to facilitate seamless integration of data services into client applications.
- Built **real-time analytics dashboards** using **Power BI**, integrating **SQL databases** for **KPI tracking**.
- Achieved **Microsoft Certifications** as a **Power BI Data Analyst Associate (PL 300)** and **Azure Practitioner (AZ 900)**.
- Skills:** Python, SQL, Excel, Data Pipelines, Financial Analytics, Data Engineering, Data Visualization.

Microsoft, Mumbai, India

August - December 2022

Pre-Sales Technology Intern

- Conducted **Business Value Assessments (BVA)** for Frontline Workers (FLW) in Manufacturing verticals, providing **solutions** that led to an increase in workflow efficiency and reduced operational bottlenecks.
- Built Proof of Concepts Dashboards by leveraging Microsoft 365 platform capabilities, **Power Apps (Low Code No Code platform)**, and **Power BI (Analytics)** aligning with internal control best practices, to create impactful **Demos**.
- Daily collaboration with cross-functional teams** to identify fitment of cloud-native solutions.
- Skills:** Predictive Analytics, Compliance Analysis, Microsoft 365, Power BI, Azure, Business Value Assessments, Risk Mitigation

PUBLICATIONS & PROJECTS

2021-2024

- LeanLLaMA: Balancing Compression and Performance** (*Preprint, Under Review*) – Co-authored a research paper at **CMU**, evaluating **state-of-the-art width pruning techniques** and **retraining strategies** for optimizing **LLaMA-2-7B** while maintaining performance. Benchmarked models using **EleutherAI Language Model Evaluation Harness** with metrics such as **BLEU, ROUGE, and BERTScore**. [Paper](#)
- Data-Driven Analysis of Major U.S. Power Outages:** Conducted exploratory and **predictive analysis** on power outages affecting 50,000+ customers using **Random Forest** and Log Transformation models, achieving 70.2% R^2 on training data for better emergency planning. [Website](#)
- E-news Express: Optimizing Subscriber Acquisition:** Conducted **A/B testing** to optimize landing pages, increasing engagement by 15%. Streamlined data collection using cloud services, enabling actionable marketing insights aligning with compliance standards. [Case-Study](#)

SKILLS & CERTIFICATIONS

- Programming Languages:** Python (Scikit-learn, TensorFlow, PyTorch, Keras), R, SQL, MATLAB, C/C++, Java, JavaScript
- Data & Cloud:** Hadoop, Azure (AZ-900 Certified), AWS, Power BI (PL-300 Certified), Tableau
- Machine Learning & AI:** Supervised/Unsupervised Learning, Neural Networks, NLP, Deep Learning
- Analytics & Modeling:** Regression, Clustering, PCA, A/B Testing, Time Series Forecasting
- Finance & Derivatives:** Futures, Options, REPOS, Swaps (Cleared/Uncleared).
- Other Tools:** Unix Scripting, Performance Tuning, Unit Testing

LEADERSHIP AND MENTORING INITIATIVES

2021-2024

- Triton Quantitative Trading (TQT):** Co-founded and led a 100+ member organization, mentoring students on quantitative projects and hosting workshops, seminars, and guest lectures, that improved members' algorithmic trading and market analysis skills. Designed and presented complex financial models and market analysis reports.
- Society of Women Engineers (SWE):** Chosen amongst 50 students nationwide for SWE's Leadership Development Program (Advanced Track) FY25 Organized outreach events and led operational improvements, ensuring alignment with compliance guidelines for event execution and budgeting.