Siddharth Mehta

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SUMMARY

M.S. Computer Science candidate (Dec 2025) with 2+ years in applied data science and current Walmart DS internship. Hands-on with LLM/RAG systems, feedback mining, drift detection, and A/B experimentation; prior experience shipping analytics/ML at ZS (1M+ weekly-record pipelines) and research in medical imaging (ASCI metric; SPIE acceptance). Proficient in PyTorch, XGBoost, FAISS, PySpark, AWS, and MLOps practices; focused on measurable impact and production reliability.

EDUCATION

University at Buffalo — *M.S. Computer Science; GPA: 3.93/4* *Aug 2024 – Dec 2025 — Buffalo, NY*

NIT, Hamirpur — *B.E. Electrical Eng.; GPA: 8.24/10* *Aug 2018 – May 2022 — Hamirpur, India*

PROFESSIONAL EXPERIENCE

Data Science Intern *July 2025 - Present*

Walmart *Bentonville, AR*

- Implemented LLM-driven feedback pipeline analyzing **5k+ monthly artifacts** (support tickets, reviews, call logs), clustering with FAISS/HDBSCAN to automate FAQ generation-projected to **reduce customer-care tickets by 30%**
- Deployed KL-divergence monitoring to detect cluster drift to keep unseen-**issue miss rate under 2%**
- Built LLM-based judge to score FAQ drafts for relevance and compliance, saving 90% manual review effort and accelerating deployment by 24 hours, forecasting **95% cost savings** over manual updates
- Conducted A/B testing with a 20% traffic pilot; **doubled query-to-FAQ match accuracy** by using BART-based extractive summarization of clustered feedback while preserving 95% semantic similarity

Machine Learning Researcher *January 2025 - May 2025*

University at Buffalo *Buffalo, NY*

- Developed self-collimation SPECT analytical framework enabling design iterations to run over **7× faster** than traditional Monte Carlo simulations, and implemented novel configuration **outperforming benchmarks by 20%**
- Devised novel metric (Angular Sampling Completeness Index) to evaluate sampling coverage in SPECT; validated on phantoms and **accepted for publication at SPIE Medical Imaging Conference**
- Applied PyTorch-based convex-hull ray-tracing optimization, **reducing system-matrix calculation time by 85%**
- Automated detector and collimator configuration using Bayesian optimization to maximize reconstruction quality

Data Science Associate *June 2022 - July 2024*

ZS Associates *Pune, India*

- Led engineering for the vaccines franchise's Next-Best-Engagement platform, integrating over **15 data sources** to process **1M+ weekly records** and **reducing data defects by 30%**
- Designed the PSTAR prioritization algorithm, optimizing rep calls, reducing effort 20% while maintaining engagement
- Built XGBoost ensembles for target prioritization, identifying top 5% customers while maximizing patient opportunity (R^2=0.70), and devised a touchpoint strategy to maximize engagement (**85% channel prediction accuracy**)
- Generated **$100K in extra revenue** by exceeding client expectations and enabling two new extensions

PROJECTS

Research Paper Coding Assistant *January 2025 - February 2025*

- Created retrieval-augmented generation (RAG) system with Mistral-7B + CodeLlama to answer technical questions from 50+ machine-learning papers, reaching **76% F1 Score** and 4.5/5 human-relevance score
- Merged FAISS vector search with TF-IDF reranking to boost hit recall **28%** over baseline keyword search
- Deployed quantized model on local 4 GB RAM device, **cutting inference cost by 40%** while maintaining latency

Cuffless Blood-Pressure Prediction | GitHub *August 2021 - April 2022*

- Developed hybrid CNN–LSTM that estimates systolic/diastolic Blood Pressure from ECG + PPG signals; achieved MAE 5.1 mmHg (SBP) and 3.8 mmHg (DBP) on MIMIC-II, meeting AAMI/ISO standards
- Co-authored a conference paper comparing classical ML vs. deep-learning approaches for non-invasive BP monitoring
- Applied Butterworth filtering and detrending to enhance signal-to-noise ratio, enabling **78.2% accuracy** with PTT-based estimation on 38 k+ patient records

SKILLS

Machine Learning: PyTorch, TensorFlow, Scikit-learn, XGBoost, Transformers, FAISS, OpenCV, A/B Testing
Data Engineering: PySpark, Airflow, Spark, Hadoop, Kedro, Data Modeling, ETL Pipelines
Cloud/MLOps: AWS (S3, EC2, EMR), GCP, Docker, MLflow, CI/CD, Kubernetes
Programming: Python, SQL, C++, GitHub