

AMIT MANJARLY

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SUMMARY

A highly motivated Machine Learning Engineer and Data Science graduate student specializing in the development and performance optimization of AI models and frameworks using C++ and Python. My expertise spans a wide range of AI domains, including Computer Vision (**CNNs**), NLP (**RNNs**, **Weighted RAGs**), and **Reinforcement Learning**. With over three years of professional experience, I have a proven track record of enhancing software performance and leveraging **convex optimization** principles to increase efficiency. My hands-on project experience in PyTorch and strong foundation in modern techniques like **prompt engineering** make me a versatile candidate ready to tackle challenges in high-performance GPU ecosystems.

SKILLS

Programming & Performance: Python, C++, Performance Tuning, Debugging, Convex Optimization

AI & Machine Learning: PyTorch, Scikit-learn, CNNs, RNNs, Reinforcement Learning (RL), Weighted RAGs, Prompt Engineering, Bayesian Networks, Hidden Markov Models (HMMs)

Development & MLOps: Git, Github, Docker, Kubernetes, Apache Kafka, Jupyter, Google Colab

Data & Databases: SQL, Pandas, NumPy, Impala, Hive, Oracle, Neo4j

EXPERIENCE

Accenture PLC

Hyderabad, India

Data Engineering Management and Governance Analyst

March 2021 – July 2024

- Engineered and optimized Python scripts by refining core algorithms, achieving a **15% reduction in processing time**.
- Increased data processing **efficiency by 25%** by analyzing complex workflows and implementing strategic improvements.
- Enhanced system stability by troubleshooting and debugging efforts on critical software issues within a large-scale international banking project.
- Coordinated cross-functional team efforts using **JIRA** and **KANBAN** boards to ensure project deadlines were met.
- Collaborated with clients to clarify technical requirements, resulting in improved project alignment and a **20% increase** in client satisfaction.
- Clarified client requirements via meetings, resulting in improved project alignment and a **20% boost** in client satisfaction.
- Participated in **User Acceptance Testing (UAT)** to ensure deliverables met end-user expectations.

Terminal Trend

Ahmedabad, India

Technical Intern

January 2021 – February 2021

- Acquired proficiency in JavaScript, progressing from foundational to advanced level for front-end development.
- Developed interactive games using HTML, CSS, and JavaScript, demonstrating creativity and versatility.
- Supported deployment on a live project, ensuring seamless client collaboration and integration.

PROJECTS

End-to-End Hybrid Movie Recommendation Engine ([Github](#))

May 2025 – June 2025

- Improved Precision@10 by 16x** over baseline by developing an optimized SVD & TF-IDF hybrid recommender.
- Implemented a **performance-tuning pipeline** to optimize latent factors, balancing precision with overfitting.
- Enhanced scalability** by resolving the **cold-start problem** for new users via a content-based suggestion engine.
- Processed raw user ratings into a sparse user-item matrix for model training using **Pandas**.

Image Classification with CNNs and SVMs ([GitHub](#))

September 2024 - November 2024

- Developed and implemented a **custom CNN architecture** using **PyTorch** for complex image classification tasks on **CIFAR-10** datasets.
- Optimized model training performance by evaluating and implementing advanced optimizers like **Stochastic Gradient Decent (SGD)** and **Adam**.
- Built end-to-end machine learning pipelines with **Scikit-learn** for efficient data preprocessing, model training, and evaluation workflows.
- Applied **Principal Component Analysis (PCA)** for effective dimensionality reduction, improving feature space efficiency.

EDUCATION

Arizona State University

Tempe, Arizona, USA

Master of science in Data Science, Analytics and Engineering

August 2024 – May 2026

Gujarat Technological University

Ahmedabad, India

Bachelor of Engineering in Computer Engineering

August 2015 – June 2019