

# AMIT MANJARLY

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## SUMMARY

Machine Learning Engineer and Data Science graduate student with **3+ years of experience** developing and optimizing AI models using **Python** and **C++**. Skilled in Computer Vision, **NLP**, and **Reinforcement Learning**, with a strong background in performance tuning and convex optimization. Experienced in deploying scalable ML solutions using **PyTorch**, **Docker**, and **Kubernetes**. Passionate about building high-performance AI systems in GPU-accelerated environments.

## SKILLS

**Languages:** Python, C++, SQL, Java, C++

**Frameworks & Libraries:** PyTorch, TensorFlow, Scikit-learn, TensorFlow, NumPy, Pandas

**AI/ML Techniques:** CNNs, RNNs, Reinforcement Learning, RAGs, Bayesian Networks, HMMs, Prompt Engineering

**Tools & Platforms:** Git, Docker, Kubernetes, Apache Kafka, Jupyter, Google Colab

**Databases:** Hive, Impala, Oracle, Neo4j

**Performance & Optimization:** CUDA, Profiling, Convex Optimization, Algorithmic Efficiency

## 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.
- Automated data quality checks with **Python** and **SQL**, improving reliability in model training workflows.

### 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