SIMARDEEP SINGH MEHTA

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EDUCATION

New York University   Brooklyn, NY
M.S. Computer Science; GPA: 3.94/4.0   *Sept. 2023 – May 2025*
- Selected Coursework: Big Data, Cloud Computing, Machine Learning, Design and Analysis of Algorithms
- NYU Academic Achievement Award – Top 5% in graduate program — Merit-Based Scholarship Recipient

Amity University, Uttar Pradesh   Noida, India
Bachelors in Computer Science; GPA: 3.77/4.0   *July 2019 – June 2023*

EXPERIENCE

Software Development Engineer   New York, USA
Amazon – Performance Advertising Core   *July 2025 – Present*
- Led a 3 member team to launch ADSP Standard Image Display, enabling automated image localization via AWS CDK pipelines and AI models, expanding advertiser reach across new regions.
- Built an immersive video localization pipeline using Nova AI for in-painting and dynamic translation. Integrated AWS Lambda, CloudFormation, and S3 for automated fallbacks to the legacy subtitle-rendering system, improving ad engagement and projected revenue for the team by 12%.
- Resolved critical API and asset-linking issues during the OLV launch by reconfiguring parent-child video mappings in AWS Pipelines and S3, and strengthening unit and integration test coverage, ensuring an on-time release with no downstream issues

Machine Learning Engineer Intern   New York, USA
American Institute for Research   *May 2024 – August 2024*
- Designed and executed an AI pipeline using Flask and ChromaDB, integrating with Open source Llama model and Azure OpenAI for an ensemble Retrieval Augmented Generation (RAG) system, resulting in a 25% improvement in document retrieval efficiency.
- Orchestrated end to end CI/CD workflows with automated testing, Github Actions and Kubernetes deployments, reducing deployment times by 20%.
- Designed Helm charts for Kubernetes, facilitating version-controlled, templated deployments of the microservices architecture optimizing environments for reliability and performance.

Data Science Intern   Gurugram, India
Ernst & Young (EY)   *June 2022 – August 2022*
- Built an ETL pipeline using AWS Glue and Lambda to process 3TB+ of financial data daily with 99.9% accuracy.
- Developed a pipeline using Python and Pandas to analyze SAP transactional data, implementing rule-based and statistical methods to detect anomalies.

TECHNICAL SKILLS

Programming Languages: Python, Java, SQL (PostgreSQL), JavaScript, React, Typescript, Dart
Frameworks: PyTorch, TensorFlow, SKlearn, Flask, FastAPI, OpenCV, Keras, XGBoost
Developer Tools: AWS, Docker, ChromaDB, MongoDB, Kubernetes, Helm, Terraform, Git, Jenkins
Libraries: Pandas, NumPy, Matplotlib, BeautifulSoup, NLTK, HuggingFace, SpaCy, FastAI

PROJECTS

EaTexas - Food Delivery App | *AWS Step Functions, Lex, SageMaker*
- Implemented a multi-modal ML pipeline using AWS Step Functions, integrating Lex with BERT for text analysis while leveraging AWS Rekognition alongside ResNet for advanced image processing of food items.
- Designed a real-time monitoring system using AWS CloudWatch and Grafana, setting up alerts and dashboards for the admin panel.
- Engineered a scalable, secure, and serverless architecture using AWS Lambda, API Gateway, and SQS, efficiently handling 1000+ concurrent users.

FashionGPT - Product Recommendation System | *FastAI, ResNet50, VGG16, CNN*
- Engineered an AI-driven fashion recommendation system combining ResNet50, VGG16, collaborative filtering, and content-based methods, improving product match accuracy by 30%.
- Implemented A/B testing framework using Python and Bayesian methods to optimize recommendation algorithms, resulting in a 15% increase in click-through rates.
- Automated data collection for 100,000+ items using BeautifulSoup, cutting manual entry by 70%.