Bhairavi Sawantdesai

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EDUCATION

Master of Science in Computer Engineering   **GPA: 3.7/4**
New York University, NY, USA   Sep 2023 – May 2025
Relevant Coursework: Advanced Machine Learning, Deep Learning, Big Data, Operating Systems, Network Security

TECHNICAL SKILLS

Languages: Python, Java, C/C++, JavaScript, TypeScript, Go, Rust, C#, Swift
Frameworks & Libraries: React, Angular, Vue, Node.js, Express.js, Spring Boot, Django, .NET, TensorFlow, PyTorch, scikit-learn, Keras, OpenCV, Hugging Face
Databases & Web: PostgreSQL, MySQL, Oracle, Redis, Firebase, SQL, NoSQL, HTML, CSS, REST APIs, GraphQL
Cloud & DevOps: AWS (Lambda, DynamoDB, S3, EC2), CI/CD pipelines, Jenkins, Docker, Kubernetes, Git, GitHub

WORK EXPERIENCE

Graduate Research Assistant
New York University, NY, USA   Aug 2024 – Dec 2024

- Implemented a real-time recession forecasting pipeline to process 1.2M+ macroeconomic indicators, enhancing prediction accuracy by 15% through advanced anomaly detection and econometric modeling.
- Applied Markov-switching models and multivariate filters to detect regime shifts with 30% lower latency, enabling faster recognition of market transitions in research outputs.
- Orchestrated a scalable, event-driven data infrastructure using Apache Spark and AWS Lambda, delivering sub-2s dashboard refreshes and accelerating downturn signal surfacing by 20%.

Software Engineer 2
Accenture, MH, India   Jun 2021 – Jul 2023

- Engineered backend services for transaction-intensive systems using Spring Boot, optimizing API throughput to improve response speed by 18% and reduce system errors by 25%.
- Redesigned a client-facing interface in React and facilitated a monorepo migration, streamlining development workflows and reducing build failures by 60%.
- Led the migration of a sales and strategy dashboard from Angular to Vue.js, cutting frontend load times by 35% and improving user engagement for 30K+ global users.
- Refactored ETL pipelines built on Informatica, minimizing data latency by 25% and improving the reliability of cross-regional sales and marketing insights.
- Streamlined release operations by enhancing CI/CD pipelines with Docker and Jenkins, reducing manual intervention by 50%, accelerating regression testing, and improving overall deployment reliability.

PROJECTS

StoryCrafter GitHub
Programmed an AI-driven storytelling app combining AWS Rekognition for image analysis and OpenAI's GPT for narrative generation; secured user access with AWS Cognito, connected RESTful APIs via API Gateway, and deployed scalable backend services using AWS Lambda, EC2, and DynamoDB.

RAG Text Summarizer Web App GitHub
Developed a Next.js frontend and Flask backend for an AI text summarizer using RAG and the `distilbart-cnn-12-6` model, achieving sub-3s response times for 10,000-word inputs.

CineMatch – AI Movie Recommendation GitHub
Architected a recommendation system using MinHash segmentation and ALS on the MovieLens dataset (33M+ ratings, 86K+ movies), achieving an ALS MAP of 0.9378 and Jaccard Similarity of 0.95; validated with a Pearson correlation of 1.00 and RMSE of 0.8793.

FoodForThought GitHub
Optimized an AI-enabled food classification model for real-time inference on Kubernetes, improving accuracy from 76% to 89% with transfer learning and CNN fine-tuning while reducing latency to 239ms and cutting costs by 30% through auto-scaling.

TaskManager – Full-Stack Task Management App GitHub
Engineered a task management system using Java, Spring Boot, and H2 database, supporting 1,000+ concurrent users while reducing API response time by 35% through optimized query execution and caching strategies.