

Aman Nagarkar

Sunnyvale, CA - 94085 | [669-388-1569](tel:669-388-1569) | amannagarkar@icloud.com | LinkedIn: [/in/aman-nagarkar](https://www.linkedin.com/in/aman-nagarkar) | Github: [/amannagarkar](https://github.com/amannagarkar)

EDUCATION

Santa Clara University - Santa Clara, CA

Master of Science in Computer Science and Engineering

Coursework: Advanced Machine Learning, Deep Learning, Reinforcement Learning, Distributed Systems, Pattern Recognition and Data Mining.

Sep 2021 – Jul 2023

GPA: 3.52/4.00

Savitribai Phule Pune University - Pune, India

Bachelor of Engineering in Computer Science

Aug 2015 – Jul 2019

GPA: 3.46/4.00

SKILLS

Languages: Python, C++, Java, Javascript. **Database:** Postgres, MySQL, Redis, GraphQL, MongoDB.

Core Competencies: Machine Learning Algorithms, SDLC, CI/CD, Data ETL, Statistical Inference, Predictive Modelling.

Deep Learning Libraries: PyTorch, Hugging Face, DeepSpeed, TensorFlow, Gensim, Scikit-Learn, OpenAI Gym, TensorRT.

Data Science: Data Analysis, Data preprocessing, Statistical Inference and Modelling, Data Interpretation, Time series forecasting.

Technologies: Git, PyTorch, Docker, Hadoop, Kubernetes, PySpark, Airflow, Flask, AWS EC2, S3, CloudWatch, EMR, Lambda, ECS.

EXPERIENCE

Software Development Engineer at Frugal Innovation Hub-SCU

Jun 2023 - Present

- Developed multilingual chatbot with translation capabilities targeting Nigerian market to improve customer experience. Leveraged Google Cloud Translation AI to build contextual translations between English and Yoruba driving 15% higher engagement.

Machine Learning Engineer Intern at KLA

Jun 2022 – Sep 2022

- Architected a ML system consisting of a question answering bot and a content-based case recommendation system applying 11+ NLP methods, improving global service engineer support by 40%.
- Utilized Airflow to build ETL pipelines organizing and storing vector embeddings from input queries, optimizing real-time data processing workflows, reducing data processing time by 30% and saving over 200 hours of manual data tagging.
- Containerised and put the system into production using Sagemaker, Docker and, Kubernetes to optimise throughput by 2x serving over 20 requests per second and latency by 120ms.
- Worked with 2-member MLOps team to set up CI/CD pipeline, integration testing and automated canary deployments for BERT QA bot resulting in 2x weekly production updates.

Software Engineer at Vint Media

Feb 2019 – Jul 2021

- Leveraged customer transaction data to design and deploy a product recommendation system, utilizing collaborative filtering to identify correlations between purchased items increasing online sales by 30%.
- Presented lean proof of concepts using data-driven insights for business stakeholders, enabling accurate demand forecasting and inventory optimization, saving \$10,000 annually.
- Trained a churn prediction model achieving 82% precision and identifying high risk customers for proactive retention.
- Managed customer data pipeline using Apache Spark to optimize data delivery for efficiency, processing 200GB of data.
- Designed cloud-based data architecture on AWS leveraging SQS, Lambda, SageMaker and S3 to enable low latency data delivery for real-time recommendations.
- Collaborated with a 3 person team to containerize machine learning microservices with Docker and orchestrate deployments on Kubernetes cluster, enabling robust scaling to production traffic levels.

Software Engineering Intern at Accurate Risk Managers

Jun 2018 – Sep 2018

- Developed a logistic regression model in a cross for risk analysis of insurance claims using Keras, with a F1 score of 0.82.
- Evaluated and fine-tuned model parameters, improving the accuracy from 0.53 to 0.81 resulting in refined risk mitigation and a 30% increase in fraud detection rate.

PROJECTS

Question Answering System with RAG Architecture | Python, Llama, Langchain, ChromaDB

- Built a question answering system with 85% accuracy using a RAG architecture composed of Llama 2.0 as the generator, ChromaDB for document retrieval, and Langchain for orchestration, enabling the system to provide accurate answers even for questions about unknown information by retrieving relevant documents for context.

News Summarizing Application | Python, TensorFlow, Keras, BERTopic, NLTK, Docker, Kubernetes

- Trained a BERT model on the news data to generate semantic representations of news articles with cosine similarity of 0.85.
- Built a recommendation engine that suggests articles based on user preferences and history using Tensorflow and Keras.
- Utilized NLTK for natural language processing tasks and integrated the summarization model with the application using Flask.

Waiterless Restaurant System | Java, Google Cloud Platform, SQLite, MongoDB

- Architected a full stack application and integrated conversational agent using REST APIs to build a virtual assistant with a speech to text and, name entity recognition ability accurate to 90% reducing local memory usage by 20Mb.
- Built the backend infrastructure, utilizing SQLite for structured data and MongoDB for efficient data storage and retrieval from Heroku, ensuring optimal performance and scalability.