

Pranav Goyanka

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EDUCATION

Boston University

Dec 2024

MS in Computer Science | GPA: 3.78/4.00

Boston, MA

Courses: Principles of Machine Learning, Distributed Systems, Tools for Data Science, Graduate Computer Networks

Thapar University

Jun 2021

BE in Electronics and Communication Engineering | CGPA: 3.73/4.00

Patiala, India

Courses: Data Structures and Algorithms, Operating Systems

SKILLS

- **Programming Languages:** Go, TypeScript, JavaScript, C++, Python, Java, SQL, HTML/CSS
- **Frameworks:** PyTorch, TensorFlow, Docker, Node.js, Socket.IO, WebSocket, OpenTelemetry, gRPC, Flask
- **Tools and Libraries:** Docker, Apache Flink, Kafka, Redis, scikit-learn, AWS, RESTful API, Git, Linux, DynamoDB
- **Other Skills:** System Design, Agile Development, Scrum, Code Reviewing, Testing, Team Collaboration, Object Oriented Programming, JSON, Pub/Sub, Event Driven Architecture, Service-Oriented Architecture

EXPERIENCE

Graduate Teaching Assistant and Course Designer

Jan 2024 – Present

Boston University

Boston, MA

- Implemented the OmniPaxos consensus protocol and developed over 30 unit-tests in Go.
- Designed assignments, grading infrastructure, and coursework for writing formal specifications using TLA+.
- Conducted weekly lab sessions and office hours for the courses CS350 and CS651 taught by Prof. John Liagouris.

Software Development Engineer

Oct 2022 – Jul 2023

Mobile Premier League

Bangalore, India

- Achieved a 40% reduction in infrastructure costs and utilization by implementing a library for metrics collection and auto-scaling using OpenTelemetry, enabling graceful node shutdowns and adoption across 7 projects.
- Boosted user engagement and retention by 70% by expanding matchmaking systems with cross-country support, enabling seamless interactions across international user bases.
- Enabled faster development and reduced bugs by engineering backend systems and libraries for Node.js microservice based server-authoritative games, eliminating boilerplate code across 7 existing and upcoming games.

Software Development Engineer

Jan 2021 – Oct 2022

Amadeus Software Labs

Bangalore, India

- Reduced chatbot development effort by over 50%, by accelerating bootstrapping time, by creating 'Chatbot as a Service', a modular Java framework for NLP APIs used by over 5 teams.
- Reduced incidents by 40% by enhancing the stability and recovery mechanisms of the C++ based Back Office tool.

Software Developer

Jun 2020 – Aug 2020

Google Summer of Code

Remote

- Contributed to the 'Social Street Smart' project to combat misinformation by developing tools during GSoC, selected as part of the 18% of applicants globally.
- Generated and deployed serverless Machine Learning models, CI/CD pipelines, and APIs for fake news detection.
- Reduced model size by 85% by migrating TensorFlow machine learning models to TFLite; hosted them on AWS Lambda.

PROJECTS

Retrieval-Augmented Generation for Internal Documentation

Jul 2024 – Aug 2024

- Developed a RAG pipeline that optimizes LLM responses based on proprietary documentation.
- Created a user-friendly web UI using Flask for uploading documentation and interacting with the model.
- Evaluated the correctness and accuracy of responses across 5 different LLMs with RAG enabled and disabled.

Automated Trading System

Mar 2024 – Apr 2024

- Predicted daily temperatures using LSTM models and performed automated trading with over 80% accuracy.
- Collected, cleaned, and processed weather data with over 12,000 data points from 4 sources via APIs for model training.

Flink on the Edge

Jan 2024 – May 2024

- Added heterogeneous device support to Apache Flink for enabling Edge compute on geo-distributed queries.
- Built a system for dynamically offloading intensive tasks to edge nodes to minimize overall latency.
- Developed a Docker environment to simulate network conditions for running experiments and benchmarking.