**Pranav Goyanka**

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**EDUCATION**

**Boston University Dec 2024**

MS in Computer Science | GPA: 3.78/4.00 Boston, MA

Courses: Natural Language Processing, Principles of Machine Learning, Distributed Systems, Tools for Data Science

**Thapar University Jun 2021**

BE in Electronics and Communication Engineering | CGPA: 8.84/10.00 Patiala, India

Courses: Data Structures and Algorithms, Operating Systems

**TECHNICAL SKILLS**

* **Programming Languages**: Go, TypeScript, JavaScript, C++, Python, Java, SQL, HTML/CSS
* **Frameworks**: PyTorch, TensorFlow, Docker, Node.js, Socket.IO, WebSocket, OpenTelemetry, gRPC
* **Tools and Libraries**: Apache Flink, Kafka, Redis, scikit-learn, AWS, RESTful API, Git, Linux, AWS S3, SQS, DynamoDB
* **Other Skills:** System Design, Agile Development, Scrum, Code Reviewing, Testing, Team Collaboration, Object Oriented Programming, LLMs, Gen AI, GPTs, JSON, Pub/Sub, Event Driven Architecture

**EXPERIENCE**

**Teaching Assistant and Course Designer Jan 2024 – Present**

Boston University Boston, MA

* Implemented the OmniPaxos consensus protocol and wrote extensive 30+ unit tests in Go.
* Designed assignments, grading infrastructure, and coursework for writing formal specifications using TLA+.
* Assisted Prof. John Liagouris in conducting weekly lab sessions and office hours for the courses CS350 and CS651.

**Software Development Engineer Oct 2022 – Jul 2023**

Mobile Premier League Bangalore, India

* Engineered backend systems and centralized libraries for Node.js microservice based server-authoritative games.
* Optimised infrastructure utilization and monitoring via centralized libraries resulting in a 40% reduction in infrastructure costs.
* Expanded matchmaking systems with cross country support, boosting user engagement and retention by 70%.

**Software Development Engineer Jan 2021 – Oct 2022**

Amadeus Software Labs Bangalore, India

* Created 'Chatbot as a Service', a modular framework to reduce chatbot development effort by more than 50%.
* Developed and released standalone Java libraries for Google Dialogflow, IBM Watson’s NLP APIs, and MongoDB.
* Rectified malfunctioning SQL database purge scripts, reducing disk space usage over 90%.
* Resolved daily incidents promptly in the C++ based Back Office Tool, resulting in a 40% incident reduction.

**Software Developer Jun 2020 – Aug 2020**

Google Summer of Code Remote

* Contributed to the project ‘Social Street Smart’ for combatting fake information on the internet.
* Generated and deployed serverless Machine Learning models, CI/CD pipelines and APIs for fake news detection.
* Migrated TensorFlow machine learning models to lightweight TFLite models and deployed them to AWS Lambda.
* Developed a JavaScript API to detect misinformation in images using the Google Cloud APIs.

**PROJECTS**

**Retrieval-Augmented Generation for Internal Documentation Jul 2024 – Aug 2024**

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

**Automated Trading System Mar 2024 – Apr 2024**

* Performed automated trades on Kalshi using LSTM models to predict daily temperatures for four cities
* Collected, cleaned and processed weather data from four sources via APIs for model training.

**Fault Tolerant Key-Value Store Oct 2023 – Nov 2023**

* Implemented the Raft distributed consensus algorithm using Go, and built a scalable key-value storage service using it.
* Ensured robustness against various network and node failures by using an extensive suite of unit tests.