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
Graduate Teaching Assistant for CS651 and CS350 (in Go)

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:** C++, C, Python, Java, Go, TypeScript, JavaScript, 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:** Event Driven Architecture, System Design, Object Oriented Programming, Agile Development, Scrum

EXPERIENCE

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 multiple cross-functional teams.
- **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** with extensive end-to-end testing for **Node.js microservice** based server-authoritative games, eliminating boilerplate code across 7 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 using Spring Boot for NLP APIs and database APIs used by over 5 teams.
- **Reduced incidents by 40%** by enhancing the stability, recovery mechanisms and **regression tests** of the **C++ based backend** – the Back Office tool, to comply with the IATA NDC standards.

Software Developer **Jun 2020 – Aug 2020**
Google Summer of Code Remote
- Selected for **GSoC** as a part of the 18% applicants globally and **contributed to the open-source** project 'Social Street Smart', aimed at combatting misinformation and fake news.
- 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.

Apache 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.

Fault Tolerant Key-Value Store **Oct 2023 – Nov 2023**
- Built a **scalable key-value storage service** by implementing the **Raft** distributed consensus algorithm in **Go**.
- Ensured robustness against network and node failures by using a **comprehensive suite of over 40 unit-tests.**