

# Pranav Goyanka

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## EDUCATION

### Boston University

MS in Computer Science | GPA: 3.78/4.00

Courses: Distributed Systems Graduate Computer Networks

Dec 2024

Boston, MA

### Thapar University

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

Courses: Data Structures and Algorithms, Operating Systems

Jun 2021

Patiala, India

## SKILLS

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

## EXPERIENCE

### Graduate Teaching Assistant and Course Designer

Boston University

Jan 2024 – Present

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

Mobile Premier League

Oct 2022 – Jul 2023

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

Amadeus Software Labs

Jan 2021 – Oct 2022

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 Back Office tool, to comply with the IATA NDC standards.

### Software Developer

Google Summer of Code

Jun 2020 – Aug 2020

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

### 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.

### 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