

# Pranav Goyanka

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## EDUCATION

### Boston University

*MS in Computer Science | GPA: 3.78/4.00*

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

Boston, MA

Sep 2023 – Dec 2024

### Thapar Institute of Engineering and Technology

*BE in Electronics and Communication Engineering | CGPA: 8.84/10.00*

Courses: Data Structures and Algorithms, Operating Systems

Patiala, India

Jul 2017 – Jun 2021

## TECHNICAL SKILLS

**Programming Languages:** Golang, Typescript, Javascript, C++, Python, Java, SQL, HTML/CSS

**Frameworks:** Pytorch, TensorFlow, Docker, Node.js, Socket.IO, Websocket, OpenTelemetry

**Tools & Libraries:** Flink, Kafka, Redis, scikit-learn, AWS, RESTful API, Git, Linux

## EXPERIENCE

### Teaching Assistant & Course Designer | *Distributed Systems (CS350 & CS351)*

Jan 2024 – Present

*Boston University*

*Boston, MA*

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

### 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 and OpenTelemetry integration, resulting in a 40% reduction in infrastructure costs.
- Improved existing matchmaking systems, leading to a 70% increase in user engagement and retention.

### Software Development Engineer

Aug 2021 - Oct 2022

*Amadeus Software Labs*

*Bangalore, India*

- Built a Splunk Dashboard for Functional Monitoring and FMEA, cutting manual tasks by 50%.
- 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 Engineering Intern

Jan 2021 - May 2021

*Amadeus Software Labs*

*Bangalore, India*

- Created 'Chatbot as a Service', a modular framework to reduce chatbot development effort by more than 50%.
- Developed standalone Java libraries for Google Dialogflow and IBM Watson's NLP APIs, and MongoDB.
- Released the libraries to the internal Maven Repository, used by other chatbot teams at Amadeus.

### Student Developer

Jun 2020 - Aug 2020

*Google Summer of Code at AOSSIE*

*Remote*

- Contributed to the project 'Social Street Smart' for combating fake information on the internet.
- Created and deployed serverless Machine Learning models, CI/CD pipelines and APIs for fake news detection.
- Migrated TensorFlow Machine Learning models to lightweight TFLite models & deployed them to AWS Lambda.
- Developed a JavaScript API to detect disinformation in images using the Google Images API.

## PROJECTS

### Fault Tolerant Key Value Store | *Golang, Raft Consensus Algorithm*

Oct 2023 - Nov 2023

- Implemented the Raft distributed consensus algorithm using Go, with snapshotting support.
- Built a key value store that uses Raft as the underlying protocol.
- Tested the system against various network and node failures to ensure fault tolerance.

### Automated Trading System | *Python, TensorFlow, scikit-learn*

Mar 2024 - Apr 2024

- Built LSTM models to predict daily temperatures for four cities using multi-source weather data.
- Created an automated trading system with Kalshi Python API, earning \$1,887 profit.
- Collected, cleaned, and processed weather data from four sources via APIs for model training.