

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.
- Expanded matchmaking systems with cross country support, boosting user engagement and retention by 70%.

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 and released standalone Java libraries for Google Dialogflow, IBM Watson's NLP APIs, and MongoDB.

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 misinformation in images using the Google Images API.

PROJECTS

Retrieval-Augmented Generation for Internal Documentation | *Fine-Tuning LLMs*

Jul 2024 - Aug 2024

- Developed a RAG pipeline that allows fine-tuning LLM responses 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 multiple LLMs.
- Added support for switching between language models on the fly via the user interface.

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

Oct 2023 - Nov 2023

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