Pranav Goyanka

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EXPERIENCE

Graduate Teaching Assistant and Course Designer **Jan 2024 – Present**
Boston University 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+.
- 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

- Brought down over 1500 lines of redundant code from 7 individual game repositories by engineering backend systems and centralized libraries for Node.js microservice based server-authoritative games.
- Achieved a 40% reduction in infrastructure costs and utilization by developing centralized libraries using OpenTelemetry, allowing for auto scaling AWS instances.
- Boosted user engagement and retention by 70% by expanding matchmaking systems with cross-country support, enabling seamless interactions across international user bases.

Software Development Engineer **Jan 2021 – Oct 2022**
Amadeus Software Labs Bangalore, India

- Reduced chatbot development effort by over 50% by creating 'Chatbot as a Service,' a modular Java framework that streamlined and accelerated chatbot deployment.
- Standardized integration across products for over 5 teams by developing and releasing modular Java libraries for NLP APIs, reducing development inconsistencies and accelerating project timelines.
- Reduced incidents by 40% by enhancing the stability and recovery mechanisms of the C++-based Back Office tool.

Software Developer **Jun 2020 – Aug 2020**
Google Summer of Code Remote

- Contributed to the project 'Social Street Smart' for combating fake information on the internet.
- 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 with RAG enabled and disabled across 5 different LLMs.

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 from four sources via APIs for model training.

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.

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

Thapar University **Jun 2021**
BE in Electronics and Communication Engineering | CGPA: 3.73/4.00 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, Flask
- **Tools and Libraries**: Apache Flink, Kafka, Redis, scikit-learn, AWS, RESTful API, Git, Linux, S3, SQS, DynamoDB
- **Other Skills:** System Design, Agile Development, Scrum, Code Reviewing, Testing, Team Collaboration, Object Oriented Programming, JSON, Pub/Sub, Event Driven Architecture, Service-Oriented Architecture