TEERTH PATEL

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EDUCATION

University of Texas - Dallas **August 2022 - May 2026**
Bachelor's, Computer Science *GPA: 4*
- Computing Scholars Honors Program, CV Honors Program
- Data Structures and Algorithms, Databases, Networks, Operating Systems

PROFESSIONAL EXPERIENCE

University of Texas - Dallas **Richardson, TX, USA**
Computer Science Mentor *August 2023 - Present*
- Aided over 1000 students to learn C++, Java, discrete math, and computer architecture by demystifying concepts, demonstrating problem-solving approaches, and providing support and feedback in the process of programming.
- Provided comprehensive review sessions in preparation for major exams, and proctored and graded exam rework sessions.
- Developed new review materials to streamline and standardize the presentation of review sessions.

University of Texas - Dallas **Richardson, TX, USA**
NLP Research Internship *May 2023 - August 2023*
- Introduced a novel method to obtain more accurate automated evaluations of Large Language Models (LLMs).
- Developed AWS MTurk web interfaces using HTML/CSS/JavaScript to facilitate dataset labeling/annotation of 200+ documents.
- Processed, analyzed, and visualized results with pandas and matplotlib.
- Collaborated in writing and publishing a paper in Transactions on Machine Learning Research

PROJECTS & OUTSIDE EXPERIENCE

P2P File Sharing *September 2024 - September 2024*
- Developed P2P file sharing system with Java Socket API.
- Implemented discovery and transfer protocols, enabling seamless joining and leaving of nodes.
- Streamlined testing by containerizing nodes via Docker.
- *Link to project*

MNIST Classifier *March 2024 - March 2024*
Handwritten Digit Recognizer
- Created a CNN-based handwritten digit classifier with 98% accuracy on MNIST dataset.
- Read and preprocessed gray-scale image data from a CSV file, as well as wrote final predictions to a CSV file with pandas.
- Trained a modernized version of LeNet with the machine learning library PyTorch. Modifications included changing activation
- functions and pooling layers.

Xuchil Inventory and Production Tracker *January 2025 - May 2025*
- Collaborated with international team to develop inventory and production tracker for local business in Oaxaca, Mexico.
- Utilized Next.js, Prisma, and SQLite to develop full stack web application.

WebConquid *December 2023 - Present*
- Developing web application to facilitate play of novel multiplayer strategy game, including login functionality, authentication, and room joining.
- Utilized graph algorithms such as BFS and Dijkstra to efficiently calculate the outcomes of specific moves and optimal paths.
- Built client-side with React and Redux using Typescript. Developed Application server with Express.js and JSON Web Token in Typescript, using WebSockets to integrate server with client.
- Stored and retrieved data via MongoDB Atlas.

SKILLS

- **Languages:** C/C++, Java, Python, JavaScript, TypeScript, HTML/CSS, Golang, SQL, PHP, Rust, C#, Bash
- **Frameworks:** React.js, Next.js, Express.js, Redux.js, jQuery, GraphQL, Jest, Gin, MongoDB, Prisma, MySQL, Pytorch, NumPy, Pandas, Spring Boot
- **Tools:** Linux/Unix, Git, Docker, Postman, JIRA, Trello