Ohm Patel

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EDUCATION

New York University — Brooklyn, NY
Master of Science in Computer Science, CGPA: 3.72/4 — *Sept. 2023 – May 2025*
Relevant Coursework: Cloud Computing, Database Systems, Machine Learning, Deep Learning, Computer Vision

Vellore Institute of Technology — Vellore, India
Bachelor of Technology in Computer Science and Engineering, CGPA: 8.91/10 — *July 2019 – May 2023*

EXPERIENCE

New York University — New York, NY
Teaching Assistant — *January 2025 – Present*
- Assisted in teaching the Management of Technology Capstone and the ML for climate change class for 100+ students
- Provided guidance in market and predictive analytics using Numpy, Pandas, Tableau, PowerBI and SQL
- Liaised with sponsors (Cubic Transportation, Orangewood Labs, Fast Hire) to align project objectives

Urban Remote Sensing — New York, NY
Machine Learning Researcher — *January 2025 – Present*
- Processed 500+ GB of hyperspectral imagery using distributed computing with Spark to gauge road conditions
- Correlated 10+ years of NYC Department of Transportation repair data, identifying that high-traffic zones showed 40% faster degradation, and areas with frequent flooding experienced 50% more cracking

Zolon Tech Inc. — Herndon, VA
Software Engineer Intern — *June 2024 – Aug 2024*
- Engineered an advanced deep learning application with Tensorflow and Keras using an LSTM architecture to forecast stock price movements by analyzing sentiment from financial news, targeting the top 20 stock tickers
- Performed extensive data cleaning and feature engineering using NLTK and spaCy, and stored processed data in a NoSQL MongoDB database to enable high-speed retrieval for model training
- Integrated 3 API endpoints (Benzinga News, Benzinga Stock, Twitter API) to establish a robust data pipeline, fetching, processing, and storing vast volumes of News data as JSON objects for model training and testing
- Spearheaded a comprehensive UI/UX overhaul of 2 key webpages for Zolon Tech's corporate website, leveraging React, Redux, CSS, Sass, and WordPress to enhance responsiveness and usability, achieving a 25% reduction in load time

Conteka Inc. — Bengaluru, India (Remote)
Software Development Intern — *July 2021 – Nov 2021*
- Built a proprietary platform designed to enable seamless employee exchange between vendors based on requirements
- Developed and improvised 10+ React.js components with Redux for state management in the application
- Leveraged AWS cloud services such as API Gateway, S3, and Lambda to establish a robust microservices architecture

PROJECTS

Spotify playlist creation based on text sentiment | *AWS - ElasticSearch, Lambda, DynamoDB, Sagemaker*
- Devised a web app to create Spotify playlists based on text prompt and lyric sentiment
- Used OAuth to enable the user to save the generated playlist into their Spotify account
- Utilized AWS services such as Lambdas, DynamoDB, OpenSearch, Elasticsearch, S3, Code Pipeline, Sagemaker, and CodeBuild for efficient data processing and storage

Dual source – Single channel Audio Source Separation | *Pytorch, Librosa*
- Generated the Libri2Mix dataset with over 5000 2-speaker overlapped audio clips from the LibriSpeech corpus
- Modified the Conv-TasNet architecture using PyTorch to separate the audio signals, achieving an SI-SDRI of 11.5

RAG News Summarizer | *LangChain, OpenAI API, PostgreSQL*
- Developed a Retrieval-Augmented Generation (RAG) pipeline using LangChain and OpenAI to generate context-aware news summaries
- Designed an API-based data ingestion system, storing and querying 1000+ news articles in an PostgreSQL database

TECHNICAL SKILLS

Languages: Python, C++, Java, C, SQL, HTML, CSS, JavaScript, TypeScript
Technologies/Frameworks: React.js, Redux, Node.js, Express.js, TensorFlow, PyTorch, AWS, Docker, Kubernetes, MongoDB, Hadoop, Spark, LangChain, Firebase, Linux, Git, Django, Flask
Industrial Certifications: AWS Certified Cloud Practitioner