

RYAN PATEL

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EDUCATION

Bachelor of Science: Computer Science
GPA : 4.0/4.0 (Fall '25) | Dean's List (Fall '25)
Arizona State University

Expected in 05/2029

Tempe, AZ

Relevant Coursework(ASU): Calculus I & II. | OOP in Java (CSE 110, 205)

Self Learning(MITx, Stanford Online, Youtube, Coursera) : ML Algorithms & Fundamentals | Deep Learning | Data Structures & Algorithms | Probability & Statistics | Linear Algebra

PROJECTS

Object Detection Web App (using YOLO) - Python, YOLOv8, OpenCV, Streamlit

- Leveraged AI to develop a web application using Streamlit and YOLOv8 that performs real-time object detection on uploaded images & videos.
- Implemented features like model size selection, adjustable confidence thresholds, and results comparison.

Stock Price Prediction LSTM | Python, TensorFlow, Keras, Pandas

- Built LSTM neural network predicting next-day stock returns with 55% directional accuracy using 9 engineered technical indicators (RSI, MACD, Bollinger Bands)
- Implemented custom loss function optimizing for trading profitability and time-series cross-validation achieving 1.28% MAE

Transformer Language Model — Implemented from Scratch (In Progress) | Python, PyTorch, LLM Research

- Implemented a multi-layer decoder-only transformer from first principles, including embeddings, multi-head self-attention, feedforward blocks, and layer normalization, with a full PyTorch training pipeline (batches, loss, optimizer, evaluation, and text generation).
- Conducted experiments on training dynamics, sequence length, and attention behavior to analyze model generalization vs. memorization, producing coherent sequences from a character-level corpus (~5k iterations).
- Designed the architecture for ablation studies and extensibility, enabling research-focused experimentation and architectural exploration.

SKILLS

- **Programming:** Python, Java, JavaScript, C++(Learning)
- **Hardware:** Digital Design, Sensors & Microcontrollers (Learning), PCB Basics
- **AI/ML:** TensorFlow, PyTorch, Computer Vision (YOLO), LSTM Networks
- **Tools:** Git, GitHub, OpenCV, Streamlit, API Integration, Linux

CERTIFICATIONS

JPMorgan Chase & Co. Quantitative Research Virtual Experience Program on Forage

Dec 2025

- Completed a simulation focused on quantitative research methods
- Analyzed a book of loans to estimate a customer's probability of default
- Used dynamic programming to convert FICO scores into categorical data to predict defaults

Other Certifications:

- Business Analysis & Process Management (2024)
- Website Building with WordPress (2024)
- Investment Risk Management (2024)
- Project Management with ClickUp (2024)
- GenAI Foundation with AWS - Foundation Model & LLMs (2025)
- GenAI Foundation with AWS - Intro to GenAI (2025)
- GenAI Foundation with AWS - AI in Business (2025)
- GenAI Foundation with AWS - Prompt Engineering (multiple) (2025)

VOLUNTEER & WORK EXPERIENCE

Business Development & Operations Intern — Greenwise Ltd. (UK) | Remote (Mumbai, India) | May–Aug 2024

- Performed comprehensive market analysis on e-commerce trends and developed a high-potential product line that drove 35% sales growth within first quarter
- Onboarded and trained new team members on operational workflows while optimizing cross-functional processes for international remote teams

Inventory & Operations Analyst | Pioneer Technologies, Mumbai, India | Nov–Dec 2024

- Engineered systematic inventory tracking system that analyzed stock levels across warehouses and optimized logistics, improving operational efficiency by 20%
- Collaborated with cross-functional teams to streamline processes and implement data-driven distribution strategies, reducing bottlenecks

Ruwa Foundation Volunteer — Mumbai, India | Nov–Dec 2024

- Organized educational workshops with technology components
- Coordinated team operations for community outreach programs

Y.B. Chauhan Centre Youth Exchange Volunteer — Mumbai, India | Jan 2023–Dec 2024

- Assisted in event organization, program management, and implementation of College Connects initiatives.

Shodh Foundation Volunteer | Skill Development Programs

- Assisted in technology-focused skill development programs for underprivileged beneficiaries
- Supported project execution and operations, demonstrating adaptability and teamwork
- Applied problem-solving and organizational skills to educational project tasks