Vishal Patel

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**WORK & LEADERSHIP EXPERIENCE**

**AI-Backend Software Engineering Intern | Zenora Management** **Remote**

*Intern* July 2025 – Present

* Developed a backend AI-powered Comparative Market Analysis (CMA) system using FastAPI and Zillow APIs, automating property valuation and reducing report preparation time by 50%
* Engineered data pipelines to extract and standardize property attributes into structured LLM-ready inputs, improving feature coverage in CMA reports by 35%
* Integrated Ollama via LangChain to generate CMA reports with valuation ranges and pricing strategies, cutting manual analyst workload by 40%
* Designed REST API endpoints for delivering CMA insights on demand, enabling seamless integration into real estate workflows and supporting scalable deployments with 99% uptime

**Lead Technical Intern | UCSD ITS** **La Jolla, CA**

*Intern* April 2025 – Present

* Spearheaded the architecture and development of an agentic AI platform using LangChain and FastAPI, orchestrating compound multi-agent systems for autonomous task execution and knowledge retrieval
* Led a team of 4 interns to prototype and deploy scalable LLM applications, accelerating model iteration cycles by 30%
* Authored comprehensive documentation and tutorials, improving system onboarding and future-proofing the AI infrastructure for rapid scaling, cutting onboarding time by 40%
* Cultivated agile development practices, reducing feature delivery cycle time by 20% and improving collaboration efficiency

**R&D AI Intern | Gainserv Infotech** **Remote**

*Intern* January 2025 – Present

* Engineered a Retrieval-Augmented Generation (RAG) Pipeline using LangChain, Qdrant, and OpenAI APIs with multi-agent orchestration, improving query accuracy by 22% and scaling workflows to handle 10k+ requests/day
* Fine-tuned transformer-based LLMs (OpenAI, Hugging Face) with PyTorch and Optuna, improving throughput by 15% and reducing training costs by 20% via early stopping and class weighting
* Built autonomous knowledge workflows in n8n with API integrations to Qdrant and OpenAI, reducing manual task intervention by 40%

**ML Engineer Intern | Admitscope** **Los Angeles, CA**

*Intern* July 2023 – September 2023

* Developed a predictive modeling pipeline using Python (BeautifulSoup, pandas, scikit-learn), automating feature engineering and deploying logistic regression models with 80% accuracy as the foundation for a scalable analytics platform
* Delivered project insights and model outputs through Jupyter and Tableau dashboards, enabling rapid prototyping cycles and aligning MVP delivery to accelerate timelines by 20%

**EDUCATION**

**University of California, San Diego La Jolla, CA**

*B.S. in Cognitive Science, Specialization in Machine Learning and Neural Computation*  **Major GPA: 3.9**

*Minors - Data Science and Finance*

* **Honors:** Provost Honors, Good Standing
* **Relevant Coursework:** Data Analytics, Supervised Machine Learning, Unsupervised Machine Learning, Reinforcement Learning, Deep Learning, Neural Networks, SQL, AWS, Data Management, Systems for Scalable Analytics, Business Analytics

**CERTIFICATIONS**

* AWS Machine Learning Specialty earned on November 23, 2024
  + Data Engineering, Machine Learning, Cloud Engineering, Model Evaluation and Validation, Exploratory Data Analysis
* Machine Learning by Stanford University & DeepLearning.AI on Coursera earned on August 14, 2023
  + **Unsupervised Learning, Recommenders, Reinforcement Learning:** PCA, Clustering, Collaborative Filtering
  + **Advanced Learning Algorithms:** Decision Trees, Multiclass Classification, Artificial Neural Networks, SoftMax
  + **Supervised Machine Learning:** Regression, Classification, Gradient Descent, Logistic Regression

**TECHNICAL SKILLS**

**Languages:** Python, Java, SQL, Dart, HTML

**ML & AI Frameworks:** PyTorch, TensorFlow, scikit-learn, transformers, LangChain, spaCy

**Data & Analytics Tools:** pandas, NumPy, Matplotlib, Tableau, Dask, AWS

**Developer Tools & Platforms:** Git, VS Code, IntelliJ, Sublime Text, Jupyter Notebook, Graylog, Flutter, n8n

**ACTIVITIES & INTERESTS**

**Awards:** Eagle Scout Award

**Activities:** Project RISHI (UCSD) – Computer Literacy / Financial Literacy Committee Member, DS3 (UCSD) – General Member, ACM AI – Project Group Member

**Hobbies and Interests:** Gardening, Carpentry, Golf