

Vedant Patel

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EDUCATION

University of California Davis

Expected Jun 2025

Bachelor of Science (B.S.) in Computer Science, Minor in Technology Management

Davis, CA

- Data Structures & Algorithms, Circuits, Computer Organization & Programming, Combinatorics, Machine Learning, Artificial Intelligence, Object-Oriented Programming, Statistics, Embedded Systems

EXPERIENCE

Software Engineering Intern

Oct 2024 – Present

Drevo

Seattle (Hybrid), CA

- Developed and deployed AI solutions using **image recognition** and **NLP (Natural Language Processing)**, reducing manual effort by **25%**
- Integrated machine learning algorithms into enterprise systems, **boosting predictive accuracy by 30%**
- Engineered and refined automation solutions in **C#, .NET, and SQL**, **increasing task efficiency by 20%**

Machine Learning Research Assistant

Feb 2024 – Present

UC Davis

Davis, CA

- Engineered energy-efficient **ECG classification** using a **quantized TinyML Random Forest (92.8% accuracy)** and an event-driven architecture with adaptive burst-mode data collection, extending **wearable battery life** from 14 days to over a month.
- Enhanced **anomaly detection to 93.6% accuracy** via advanced feature engineering and strategic hyperparameter tuning with **GridSearchCV** on resource-constrained devices.
- Optimized deep learning for **time-series data** using **SHAP and LIME**, achieving a **7% accuracy boost** and enabling hybrid offloading of complex multilabel classification to **server-side CNN and XGBoost models** for comprehensive health monitoring.

Machine Learning Intern

Oct 2021 – Dec 2021

ArtifIntel Pvt. Ltd.

Bengaluru(Remote), India

- Executed comprehensive **data preprocessing** and transformation on inconsistent datasets, employed **classification and regression** techniques for training supervised learning models to achieve an impressive **98% accuracy**
- Created detailed visual reports with **Matplotlib and Seaborn**, enhancing data interpretability and enabling a **25%** improvement in strategic planning accuracy across multiple departments

PROJECTS

CorpCred corpcred.vercel.app | NextJS, TailwindCSS, Vercel, Render

Oct 2024 – Jan 2025

- Engineered a full-stack web application using Next.js, TailwindCSS, and Flask that leverages a Random Forest model to predict corporate credit ratings, achieving a **15%** improvement in risk assessment accuracy
- Optimized a responsive user interface for real-time financial analysis and deployed a scalable architecture on Vercel and Render, **reducing latency by 30%** and **boosting user engagement by 20%**

InvestIQ AI investiqai.vercel.app | NextJS, TailwindCSS, Vercel, LLMs

Jun 2024 – Dec 2024

- Spearheaded the development of an AI-driven personal finance web application, integrating machine learning algorithms to provide predictive financial analysis with **90% accuracy** and **optimize portfolio performance by up to 15%**
- Engineered a full-stack solution featuring an intelligent chatbot with 95% user query resolution rate, and data visualization tools that **reduced financial decision-making time by 30%**

LEADERSHIP

AI/ML Project Manager | CodeLab | Davis, CA

Jan 2024 – Apr 2024

- Led the Summarizit project team to develop an innovative web application that **boosted user productivity by 40%** through efficient video content summarization while engineering scalable solutions with **React, Node.js, Express, and MongoDB** that increased data retrieval speed by 40% and overall system performance by 25%

PUBLICATIONS

[1] **Extended Operational Life for Wearable Health Devices: A Hybrid TinyML and Server-Side ML Approach** 

[2] **Corporate Credit Rating Prediction** 

TECHNICAL SKILLS

Languages: Python, C/C++, Java, JavaScript, Typescript, C#, SQL HTML5/CSS3, R, MATLAB

Frameworks: Next.js, Postgres, PyTorch, Prisma, Vercel, Django, .NET, React, Node.js, Flask, MongoDB, AWS, JIRA

Developer Tools: Git, Docker, CI/CD, Google Cloud Platform, VS Code, PyCharm, Eclipse, TensorFlow, Jupyter