Vedant Patel

530-204-8133 | vsxpatel@ucdavis.edu | linkedin.com/in/Vedant | github.com/Programmer7129 | Portfolio Website

EDUCATION

University of California Davis — Jul 2022 – Jun 2025

Bachelor of Science (B.S.) in Computer Science and Engineering, Minor in Technology Management — *Davis, CA*

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

EXPERIENCE

Undergraduate Research Assistant — Feb 2024 – Present

UC Davis — *Davis, CA*

- Achieved efficient binary classification of ECG signals with **92.8%** accuracy by **ensemble Random Forest Classifier (TinyML)** while significantly enhancing battery life through efficient low-power algorithms.
- Employed **advanced feature engineering** and **XGBoost** ensemble modeling, achieving a remarkable **93.6% accuracy** in predictive analysis through fine-tuning and strategic **hyper-parameter optimization** with **GridSearchCV**, enhancing the robustness of anomaly detection.
- Implemented **SHAP and LIME** techniques to refine **Multi-layer Perceptron, Deep Neural Network, and Recurrent Neural Network** machine learning models for time-series data, resulting in a **7% accuracy boost** ensuring optimal operation in constrained wearable device environments.

Data Science 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.

LEADERSHIP

Project Manager — Jan 2024 – Apr 2024

CodeLab — *Davis, CA*

- Led the Summarizit project team to develop an innovative web application that analyzes and summarizes extensive video content, resulting in a **40% increase in user productivity and information accessibility**.
- Engineered scalable web applications with **NextJS**, **Express**, and **MongoDB** optimizing **CRUD routes** to increase data retrieval speed by **40%** and enhance overall system performance by **25%**

Technology Director — Sep 2023 – Present

Google Developers Student Club (GDSC) — *Davis, CA*

- Led the development of AI/ML projects resulting in a **35%** increase in user engagement via a music recommender, a **90%** accurate medical chatbot, and a poker bot surpassing human performance in **70%** of scenarios.
- Collaborated with industry experts to organize **8 guest lectures and 5 panel discussions**, increasing the club's network by **40%** and providing over **120 members** with valuable insights into current industry trends.

PROJECTS

EduParse | *Python, React, Flask, AWS* — Apr 2024 – Present

- Engineered a Chrome extension that generates customizable practice exams from PDF lecture notes, resulting in a **60% increase** in study efficiency for users and deploying the application on **AWS for scalable cloud-based functionality**.

Scream Detection Deep Neural Network | *Python, MLP, Deep Learning, React* — Apr 2023 – Apr 2023

- Developed and deployed **SVM regression** and **Multi-Layer Perceptron (MLP)** models for real-time distress call detection, achieving an overall accuracy rate of **93%** by distinguishing acoustic level differences.

TECHNICAL SKILLS

Languages: Python, C/C++, Java, JavaScript, HTML5/CSS3, R, MATLAB
Frameworks: React, Node.js, Flask, WordPress, Material-UI, MongoDB, AWS
Developer Tools: Git, Docker, Google Cloud Platform, VS Code, PyCharm, Eclipse, TensorFlow, Jupyter