

Vedant Patil

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Summary

Data Science professional with core expertise in AI/ML, data science, and scalable system design. Experienced in data analysis, interpretation, and strategy to deliver actionable insights and business value. Experienced in delivering impactful projects across predictive modeling, NLP, automation, and Generative AI, with a focus on translating complex data into actionable insights. Served as President of ITSA (2022–2023) and Team DevKraft (2023–2025), leading 100+ members, organizing large-scale coding initiatives, and fostering a strong technical culture. Consistently recognized for academic excellence with a 9.52 CGPA, complemented by leadership and innovation in data-driven applications.

EDUCATION

Dr. D.Y.Patil Institute of Technology, Pune

Bachelor of Engineering in Computer Science

Sept. 2023 – July 2026

GPA: 9.2/10

Government Polytechnic Nashik, Nashik

Diploma in Information Technology

Aug. 2020 – June 2023

Per: 90.63%

PROJECTS

Mental Health Analysis using Social Media Data (NLP)

- Engineered NLP pipeline (BERT, Transformers, TF-IDF), performed data cleaning and interpretation on 50k+ social media posts to ensure reliability and actionable insights."
- Achieving accuracy by 18% over baseline ML models, deployed via Hugging Face Spaces for real-time explainable AI
- Deployed explainable AI (SHAP/LIME) on Streamlit/Hugging Face Spaces for real-time, ethical analysis.

Jan 2025 – Mar 2025

Generative AI-Powered Healthcare Q&A System

- Fine-tuned LLMs with RAG, FAISS, and vector databases for accurate, source-grounded medical answers.
- Applied data strategy principles to align ML pipeline with accurate, business-relevant outputs.
- Integrated LangChain, FastAPI, CI/CD, Docker, AWS/GCP for scalable low-latency deployment.
- Released demo on Hugging Face Spaces (Gradio), contributing to open-source Generative AI in healthcare.

Apr 2025 – May 2025

Autonomous Stock Portfolio Manager (Reinforcement Learning + Finance)

- Designed RL agent (Q-learning, DQN) with LSTM, ARIMA, Prophet for adaptive stock trading.
- Built scalable pipeline with preprocessing, data warehousing, and reinforcement learning for decision-making.
- Processed datasets via Yahoo Finance API, Pandas, NumPy, simulating 12–15% improved returns.
- Built pipeline with PyTorch, TensorFlow, Scikit-learn for reward optimization and volatility reduction.

Jun 2025 – Jul 2025

RESEARCH WORK

Measuring Neural Activity in the Age of AI: EEG Analysis of Professionals With and Without AI Assistance (Ongoing)

- Investigating cognitive load and neural activity through EEG signal analysis in professional tasks performed with and without AI support.
- Applying machine learning, deep learning, and signal processing techniques for classification and pattern recognition of brain signals.
- Research aims to provide insights into the impact of AI-assisted workflows on human cognition and productivity, with planned submission to IEEE/Elsevier journals.

May 2025 – Oct 2025

EXPERIENCE

Python Mentor & Student Trainer

- Trained 50+ students across 3 colleges in Python, data structures, and AI tools.
- Mentored 50+ students in building 10+ real-time projects, enhancing practical coding skills.
- Introduced AI tools and Python frameworks (TensorFlow, PyTorch, Scikit-learn, Flask, Django).

Sept. 2025 – Present

ACHIEVEMENTS

- Secured 9.52 CGPA in Computer Engineering (Honors in Data Science).
- President, ITSA (2022–2023) and Team DevKraft (2023–2025), leading 100+ members.
- Organized institute's first-ever 24-hour hackathon at DPU.
- Contributed to open-source AI/ML projects on Hugging Face, advancing accessible research.
- Certifications – IBM(Data Science), TCS-ION (Young Professional),

TECHNICAL SKILLS

Programming: Python, Java, C++

Machine Learning & AI: Machine Learning Algorithms, Deep Learning, NLP, Generative AI, Computer Vision, Predictive Modeling, Reinforcement Learning

Frameworks & Libraries: TensorFlow, PyTorch, Scikit-learn, Keras, NumPy, Pandas, OpenCV

Data Visualization: Tableau, Power BI, Matplotlib, Seaborn, Plotly

Databases & Big Data: SQL, MySQL, MongoDB, Apache Spark, Hadoop

Cloud & Tools: AWS, GCP, Git, GitHub, Jupyter Notebook, Linux

Practices: Data Analysis, Data Cleaning, Data Interpretation, Data Warehousing, Data Strategy, Data Pipelines, Feature Engineering, Model Deployment, System Design, OOP, Agile, CI/CD, SDLC

RELEVANT COURSEWORK

Machine Learning, Deep Learning, Artificial Intelligence, Natural Language Processing, Generative AI, Data Mining, Big Data Analytics, Statistics, Statistical Modeling, Cloud Computing, Data Structures & Algorithms, Database Management Systems, Distributed Systems, Software Engineering

EXTRACURRICULARS

President Team Devkraft (DIT Pimpri, Pune)

Oct 2022 - Sept 2025

- Led and managed a 100+ member team, driving collaboration and technical growth initiatives.
- Organized the institute's largest 24-hour hackathon with 400+ participants and 100+ project submissions.
- Initiated multiple events and 50+ workshops to foster coding culture and enhance student skills.

President ITSA (Government Polytechnic College, Nashik)

Jun 2022 - Jun 2023

- Directed a 700+ attendee technical fest featuring 20+ workshops and seminars.
- Managed and mentored a team of 30+ members, ensuring smooth coordination of events and activities.
- Enhanced student engagement by leading 1 hackathon, 5+ coding events, and 10+ workshops, impacting 500+ students.