Parth Bijal Bharadia

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Education

Vellore Institute of Technology — **VIT Bhopal**
Bachelor of Technology – Computer Science specialization in Health Informatics — Oct 2022 – Oct 2026

Key Skills

Programming Languages: SQL (Structured Query Language), Python (Pandas, NumPy)
Machine Learning Tools: Scikit-learn, PyTorch
Computer Vision: OpenCV, YOLO
Data Science & Analytics: Exploratory Data Analysis (EDA), Feature Engineering, Data Visualization
Tools and Technologies: Jupyter Notebook, VS Code, Git, Streamlit, PyCharm

Projects

Car Damage Detection Using Deep Learning Project Link
[Python / PyTorch / Fine-tuned ResNet50] Apr 2024 - May 2024

- Developed a deep learning-powered Streamlit web app using a fine-tuned ResNet50 model in PyTorch to classify car damage types with **92% accuracy** on front and rear damage images.
- Reduced vehicle damage assessment time by 90% through development of near real-time detection system using uploaded photos, classifying normal, crushed, and breakage with ResNet50 model, enabling faster claims processing.
- Processed and tested on **500+ labeled vehicle images**, achieving over **90% classification accuracy** with inference time under **2 seconds per image**.

CredX – Credit Risk Modeling Project Link | Live Deployment
[Python / Scikit - learn / Streamlit] Mar 2024 - Apr 2024

- Deployed **CredX**, a Streamlit-based credit risk assessment app using a logistic regression model trained on borrower demographics, loan details, and credit history features to predict default probability with **85% accuracy**.
- Implemented a comprehensive scoring system that generates credit scores (300–900) and assigns risk ratings ('Poor' to 'Excellent') for personalized borrower evaluation and improved lending decisions.

GhostBoard: AI Virtual Keyboard Using Hand Gestures Project Link
[Python / OpenCV / MediaPipe] Feb 2024 - Mar 2024

- Built a real-time gesture-based virtual keyboard using Python, OpenCV, MediaPipe, and cvzone, achieving **95% gesture recognition accuracy** and enabling touchless typing via webcam-based hand tracking.
- Integrated pynput to simulate keyboard inputs, enabling the virtual keyboard to type detected alphabets directly into applications like Notepad with smooth and accurate response.

Expense Tracking and Visualization System Project Link
[Python / MySQL / Fast API] Feb 2024 - Mar 2024

- Engineered a modular expense management system combining Fast API backend and Streamlit frontend for efficient user experience.
- Developed an interactive dashboard that empowers users to monitor spending, organize transactions, and define monthly budgets.
- Leveraged Python data analysis tools to detect spending anomalies, generate visual insights through charts, and provide personalized budget predictions with **85% accuracy** based on user history.

Certifications

- **Supervised Machine Learning: Regression and Classification – Deep Learning.AI, Stanford University** Link
- **Python for Computer Vision with OpenCV and Deep Learning – Udemy** Link
- **Complete 2025 Python Bootcamp: Learn Python from Scratch – Udemy** Link
- **IBM Machine Learning Professional Certificate – IBM (in progress)**

Achievements

- **Secured All India Rank 252** in the National Defense Academy (NDA) written examination, demonstrating strong aptitude, discipline, and national-level competitive excellence.
- **Solved 100+** Data Structures & Algorithms problems on LeetCode and GeeksForGeeks.