

Nayan Chavda

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Profile

Highly motivated Data Scientist with 1+ years of experience in developing and implementing machine learning solutions for healthcare applications. Proven ability to leverage advanced analytical skills and technologies like CNNs and OpenCV to solve complex problems, improve diagnosis accuracy, and drive efficient healthcare workflows.

Work Experience

Machine Learning Engineer

Collateral Medical Private Limited

08/2024 – present | Mumbai, India

Retinal Tortuosity Detection:

- Diagnosing hypertensive and diabetic retinopathy or glaucoma took up to three days with traditional methods like blood test.
- Used image processing and a CNN model to instantly detect retinal tortuosity and related conditions.
- Provided a fast, efficient diagnostic tool, reduced diagnosis time by 80%

Pupillometer Analysis:

- Diagnosing neurological and physiological conditions through medical history, physical exams, and lab tests was time-consuming.
- Developed a pupillometer to monitor real-time pupil dilation and contraction using OpenCV for instant analysis and diagnosis.
- Enabled faster, more efficient diagnosis of pathologies and physiological conditions.

Liquid Crystal Thermometer Project:

- Detecting temperatures from wearable thermometers for babies was challenging due to the small crystal dots.
- Developed an image-processing-based temperature recognition system for instant and accurate temperature detection.
- Achieved fast detection with over 94% accuracy, enhancing healthcare solutions for reading temerature.

Plantar Pressure Analysis:

- Refined image preprocessing using OpenCV, improving clarity and feature extraction.
- Incorporated advanced predictive modeling techniques to enhance analysis accuracy.
- Developed a robust diagnostic model with 80% accuracy for classifying foot deformities, enabling early detection of related diseases.

Machine Learning Intern

Collateral Medical Private Limited

06/2023 – 02/2024 | Mumbai, India

- Diagnosing foot deformities like flat feet and high arches was inefficient and lacked accuracy using traditional methods.
- Developed a system using **OpenCV** for image preprocessing to classify foot deformities, incorporating parameters like pressure distribution.
- Achieved over **85% classification accuracy** and delivered a scalable diagnostic tool for healthcare professionals.

Skills

Technical Skills:

- Programming Languages:** Python, SQL, Java
- Machine Learning:** CNN, OpenCV, Computer Vision
- Tools & Libraries:** OpenCV, Numpy, Pandas, Matplotlib, Scikit-learn, TensorFlow, PyTorch,
- Databases:** PostgreSQL
- Cloud:** GCP

Projects

Crash Code

E-Learning App using React Native

- Developed and executed the E-Learning App containing C, C++, Java languages using React Native and simple npm libraries.
- Contributed to making online learning easier during the Covid-19 pandemic, providing a convenient and interactive platform.

Certificates

Machine Learning Specialization

Coursera | Andrew Ng

Google Could Skill Boost

SQL GOLD LEVEL

HackerRank

Certificate of Appreciation

completing online workshop on Data Analytics

Education

B.E. in Information Technology

Shah and Anchor Kutchhi Engineering College

2021 – 2024 | Mumbai, India

Aggregate Pointer: 8.27

Honours Degree, AI/ML

Shah and Anchor Kutchhi Engineering College

2022 – 2024 | Mumbai, India