Harshitha J
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Professional Summary

AI and NLP developer seeking a software internship to build intelligent and scalable applications. Experienced in Natural Language Processing and deep learning using Artificial Neural Networks. Skilled in computer vision, hand-gesture input mapping, and vision-based automation using OpenCV, MediaPipe, and Tkinter. Developed an interactive digital art showcase platform with strong focus on UI and UX design, emphasizing usability and visual experience. Passionate about innovation, automation, and AI-driven software development.

Technical Skills

Machine Learning & NLP:
Python | Scikit-learn | SVM (Classification) | ANN (Artificial Neural Networks) | Sentiment Analysis | NLP Preprocessing

Computer Vision & Automation:
OpenCV | MediaPipe | Facial Landmark Detection | Eye & Blink Tracking | Webcam Vision Systems

Frontend & UI Skills:
HTML | CSS | JavaScript | Bootstrap | jQuery | Responsive UI Development

Databases:
MySQL | MongoDB | SQL API Integration

Development Tools:
VS Code | GitHub | MySQL Workbench | NumPy | Pandas | Matplotlib

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Projects

Sentiment Analysis of Movie Reviews — NLP

• Developed a sentiment classification model for movie reviews using Support Vector Machine (SVM) algorithm.
• Performed data preprocessing, feature extraction, and model training for accurate polarity detection (Positive/Negative).
• Tools used: Seaborn, NumPy, Pandas, and Python for analysis and visualization.

Health Data Analysis and Prediction using Machine Learning• Built a machine learning system to analyze health datasets, identify patterns, and predict healthy diet outcomes.
• Implemented supervised (Decision Tree, Naïve Bayes, KNN, KNN, ANN) and unsupervised learning (K-Means clustering using Elbow Method).

• Applied label encoding, feature scaling, train-test split, regression & residual analysis, and model evaluation.
• Tools & Libraries: Python, Pandas, NumPy, Scikit-learn, Matplotlib, Seaborn.

Autoencoder-Based Image Reconstruction Using Neural Networks

• Developed an unsupervised deep learning model using an **Autoencoder neural network** to learn compressed latent representations and reconstruct handwritten digit images.
• Implemented using **TensorFlow, Keras**, and trained on the **MNIST dataset**.
• Demonstrates knowledge of neural network architecture, image preprocessing, feature extraction, and reconstruction.
• Libraries: TensorFlow, Keras, NumPy, Matplotlib, Python.

EyeBridge — Assistive Communication Using Eye Movements

• Built a hands-free assistive communication system for paralyzed users using eye gaze and intentional blinks via webcam.
• Implemented facial landmark and eyelid tracking for gaze-based commands (food, water, rest, emergency).
• Triggers real-time room audio alerts and sends SMS to caretakers after user-specific calibration.
• Tech used: Python, OpenCV, NumPy, Tkinter.

Art Gallery — Digital Artwork Showcase Platform

Tools: HTML | CSS | JavaScript | Bootstrap | PHP | jQuery | XAMPP
• Developed a digital art showcase platform to display creative artworks, focusing on an engaging and interactive visual experience.

Hackathons & Competitions

Tek-Nothon — Hosted by Tekvocation
21 June 2025
• Built a gesture-controlled automation system enabling real-time control of mouse and keyboard using hand tracking.
• Tech used: Python, OpenCV, MediaPipe, Tkinter, Hand Gesture Automation.
• Achievement: Received participation and project demonstration certificate.

Certifications

• Python Essentials-1 for Machine Learning — Cisco Networking Academy, 2025
• Python Essentials-2 for Machine Learning — Cisco Networking Academy, 2025
• Tek-Nothon Certification — Tekvocation, 21 June 2025
• Fundamentals of Deep Learning — NVIDIA, 2025
• TATA Crucible Campus Quiz — Participant, 2025

Magic Bus – Connect with Work Programme

• Successfully completed the Magic Bus – Connect with Work training programme through VVIET Academy, 2025.
• Gained skills in non-verbal communication, adaptability, creativity, collaboration, critical thinking, workplace ethics, digital fundamentals, and interview readiness.

Education

Master of Computer Applications (MCA)
Vidya Vikas Institute of Engineering and Technology, Mysore
Expected Graduation: 2026

Bachelor of Computer Applications (BCA)
Seshadripuram College, Tumkur
Graduated: 2024
Percentage: 92%

Additional Strengths

• Hands-on experience in computer vision-based automation systems
• Strong foundation in machine learning and NLP model development
• Effective debugging and logical problem-solving under time constraints
• Product-driven mindset with emphasis on accuracy and reliability

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Declaration

I declare that the above information is true to the best of my knowledge.

Harshitha J