HARSH AGARWAL

AI Application Engineer | Machine Learning & Model Development

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PROFESSIONAL SUMMARY

AI Application Engineer focused on building application-first AI systems that bridge the gap between complex model development and real-world deployment. Experienced in orchestrating end-to-end machine learning and generative AI pipelines, including model training, evaluation, and integration into scalable REST APIs. Strong emphasis on delivering reliable, high-performance AI solutions with measurable impact on accuracy and user experience.

CORE SKILLS

- **Model Development:** Machine Learning, Deep Learning (ANN, CNN), Model Training/Tuning, Evaluation Metrics.
- **AI Applications:** FastAPI, Streamlit, REST API Development, Model Inference, Multimodal Pipelines.
- **Computer Vision & NLP:** Image Classification, Segmentation (OpenCV, MediaPipe), Prompt Engineering.
- **Frameworks & Tools:** PyTorch, TensorFlow/Keras, Hugging Face, Scikit-learn, NumPy, Pandas.
- **Infrastructure:** Python, MongoDB, Git, Modular Pipeline Design.

PROFESSIONAL EXPERIENCE

AI Developer Intern June 2025 – Dec 2025
Codified Web Solutions, Jaipur, India

- **Engineered** AI-driven applications, converting raw image inputs into meaningful visual insights for production environments.
- **Architected** reusable, modular AI pipelines that increased production efficiency and reduced manual rework by approximately 30%.
- **Optimized** model consistency and deployment reliability across various user-facing platforms.

SELECTED TECHNICAL PROJECTS

Student Mental Health Prediction Application Dec 2025 – Present

- **Constructed** a predictive AI application using academic and behavioral datasets to identify mental health risk indicators.
- **Implemented** a real-time inference engine with Streamlit, incorporating stored history for continuous model refinement.

Malaria Cell Image Classification (CNN) Oct 2025

- **Formulated** a Deep Learning system for automated medical image classification, achieving approximately 95% accuracy.
- **Streamlined** screening workflows by reducing manual analysis effort for microscope data.

AI House Prompt Enhancer & Visualizer June 2025 – Present

- **Synthesized** a Generative AI application that utilizes prompt engineering to transform base images into high-fidelity exterior designs.
- **Integrated** interactive input refinement features for dynamic, repeatable visual generation.

Multi-Platform Social Media Automation July 2025 – Aug 2025

- **Devised** a rule-based automation system that reduced manual social media management effort by 50% across multiple platforms.

KEY ACHIEVEMENTS

- **Accuracy Optimization:** Improved model prediction accuracy by 15% through iterative evaluation and hyperparameter tuning.
- **Efficiency:** Automated complex social media workflows, reducing manual operational effort by 50%.
- **Reliability:** Successfully achieved high-accuracy results (95%) in critical medical imaging classification tasks.

EDUCATION

Bachelor of Technology in Computer Science (AI & ML) 2023 – Present
JECRC University, Jaipur, India