Vedant Sanjay Chavan

AI ENGINEER

Details

Lippstadt
Germany
vedantchavan097@gmail.com

NATIONALITY

Indian

DATE OF BIRTH

27.01.1997

Links

Linkedin

ChatBot

Languages

English

German

Hindi, Marathi

Hobbies

Chess, Drawing

Profile

AI Engineer with expertise in Machine Learning, Deep Learning, and Computer Vision, experienced in developing and deploying end-to-end machine learning models. Proven ability to drive impactful projects, including NLP, image analysis, 3D image segmentation, and autonomous systems, with a focus on delivering scalable and robust AI solutions. Proficient in Python, PyTorch, TensorFlow, and ONNX Runtime, with hands-on experience in cloud platforms like Google Cloud and Azure.

Skills

- **Programming & Tools:** Python, C++, MATLAB, PyTorch, TensorFlow, ONNX Runtime, FastAPI, Docker, Git
- **Machine Learning & AI:** Deep Learning, Computer Vision, 3D Image Segmentation, NLP, Reinforcement Learning, LLMs, RAG Techniques
- **Data Processing & Visualization:** Pandas, NumPy, OpenCV, Matplotlib
- **Cloud & Deployment:** Google Cloud Platform (GCP), Microsoft Azure, Hugging Face Spaces, MLOps, Model Deployment
- **Development Practices:** CI/CD, Code Reviews, Version Control, API Development, Agile Methodologies

Employment History

AI- Research Intern, HELLA GmbH & Co. KGaA

AUGUST 2023 — FEBRUARY 2024

- Developed and optimized AI models for autonomous lighting systems, improving object localization reliability by 30%.
- Implemented ONNX runtime models for enhanced integration in automotive systems.
- Designed and managed end-to-end machine learning pipelines, ensuring robust model performance in real-world scenarios.
- Conducted extensive data preprocessing and model validation to support safety and compliance standards.

Master Thesis – Deep Stereo Vision for Nighttime Driving Scenes, HELLA GmbH & Co. KGaA, Lippstadt

APRIL 2024 — NOVEMBER 2024

- Designed a CNN-based depth estimation model using PyTorch, achieving 90% accuracy in low-light scenarios.
- Implemented synthetic data generation using Unreal Engine 5, enhancing training data diversity.
- Contributed to research and development, providing data-driven insights for improved model performance.
- Collaborated with cross-functional teams to validate models under regulatory guidelines.

Projects

Conversational AI Chatbot with RAG & LLM Fine-Tuning

FEBRUARY 2025

- Designed and deployed a GPT-based conversational AI assistant, integrating FAISS vector search for RAG optimization.
- Ensured scalability and reliability by deploying the chatbot using Docker and Hugging Face Spaces

Predictive Maintenance Using XGBoost

DECEMBER 2024

- Developed an end-to-end predictive maintenance model leveraging XGBoost for industrial failure prediction.
- Achieved 98% accuracy by tuning model hyperparameters and implementing advanced analytics.

Defect Detection in Prints Using U-Net, Rosenheim

JANUARY 2023 — APRIL 2023

- Implemented a U-Net-based model for defect detection, achieving 95% precision and reducing manual inspection time by 50%.
- Built a robust AI pipeline processing 1000+ images per day, enhancing data throughput by 25%.

Reinforcement Learning for RRR Robot

JANUARY 2023

- Developed a reinforcement learning model for optimized path planning of a robotic arm, improving task efficiency.
- Trained the model for 1000+ episodes, achieving consistent end-effector accuracy in a 3D environment.

Education

M.Eng. in Engineering Sciences, Technische Hochschule Rosenheim

OCTOBER 2021 — NOVEMBER 2024

B.Tech. in Mechanical Engineering, Vellore Institute of Technology, Vellore

JULY 2015 — AUGUST 2019

Certifications

Diploma in Advanced Computing, Centre for Development of Advanced Computing (C-DAC), Pune

SEPTEMBER 2020 — APRIL 2021

Machine Learning- Stanford University, Coursera