Kunal Chaugule

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ABOUT ME

Final-year Data Science Engineering student with hands-on experience in machine learning and computer vision projects. Winner of Smart India Hackathon 2023 and passionate about solving real-world challenges using AI.

WORK EXPERIENCE

01/2025 – CURRENT Navi Mumbai, India
MACHINE LEARNING RESEARCH ASSISTANT DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING - DATA SCIENCE AT SARASWATI COLLEGE OF ENGINEERING

- Developed CNN models for object detection and image segmentation, improving real-world performance.
- Conducted data preprocessing, and analysis, and contributed to research documentation.
- Demonstrated technical expertise and collaborative problem-solving in advancing research projects.

23/09/2024 – CURRENT Mumbai, India
MACHINE LEARNING ENGINEER THE ANALYZING COMPANY

- Developed optimized deep learning models for object detection and image segmentation, reducing errors by 30%.
- Improved preprocessing accuracy by 25% using advanced image processing techniques.
- Built scalable ML pipelines with TensorFlow, PyTorch, and OpenCV, enhancing efficiency by 20%.

05/02/2024 – CURRENT Mumbai, India
FULL STACK DEVELOPER STOFFPSOT

- Led a team of six developers to deliver a responsive web application, achieving a 100% on-time delivery rate.
- Designed and implemented scalable, user-friendly websites that increased client satisfaction by 40%.
- Coordinated with stakeholders to ensure alignment with project goals, reducing scope creep by 20%.
- Enhanced code quality by introducing automated testing and CI/CD pipelines, reducing bugs by 30%.

PROJECTS

11/2023 – 02/2024
FITLIFE - Exercise Tracking and Guidance Web App

- Developed a web app for pose estimation and exercise tracking using custom ML models; won Smart India Hackathon 2023.

Link https://github.com/kunal0230/FITLIFE

04/2024 – 05/2024
Polyp Segmentation Using UNet 3+

- "Built UNet 3+ model for polyp segmentation, achieving 92% IoU and 90% Dice Coefficient. Preprocessed medical imaging datasets for deployment-ready diagnostic pipelines.

Link https://github.com/kunal0230/Polyp-Segmentation-Using-UNet-3-with-TensorFlow

12/2024 – CURRENT
Self-Driving Car Simulation Using Stereo ESP32-CAM with Machine Learning and Depth Estimation

- Developed stereo ESP32-CAM simulation for depth estimation, integrated ML-based navigation using TensorFlow and OpenCV.

Link https://github.com/kunal0230/Self-Driving-Car-Simulation-Using-Stereo-ESP32-CAM

11/2024 – 12/2024
Virtual Piano - Interactive Music Application Using Computer Vision

- Created an interactive virtual piano using OpenCV and MediaPipe with hand movement detection and segmentation, enabling dynamic screen-based musical interaction.

Link https://www.youtube.com/shorts/ZdxvdxJ5CQM

EDUCATION AND TRAINING

12/2021 – CURRENT Navi Mumbai, India
BACHELOR IN CSE DATA SCIENCE WITH HONOURS (CYBER SECURITY) Saraswati College of Engineering, Kharghar, University of Mumbai

Website https://engineering.saraswatikharghar.edu.in/ | **Level in EQF** EQF level 6

CERTIFICATIONS

Relevant Certifications and Technical Training

- **Neural Networks and Deep Learning** – DeepLearning.AI (January 2025) *Mastered deep neural networks, backpropagation, and optimization techniques.*
- **Complete Machine Learning, NLP Bootcamp, MLOps & Deployment** – Udemy (September 2024) *Learned ML workflows, NLP techniques, and deployed models in production.*
- **PyTorch for Deep Learning Bootcamp** – Udemy (September 2024) *Gained hands-on experience with PyTorch for training and optimizing neural networks.*
- **Computer Vision and Image Processing** – IBM (August 2024) S*kills in image classification, object detection, and CNN.*
- **Understanding Research Methods** – SOAS University of London *Learned foundational research methods and academic writing.*

DIGITAL SKILLS

programming: Python, MATLAB and SQL | Html, Java, CSS | Computer VIsion | Image Processing, Image Analysis, Image Segmentation | Advance knowledge in Machine Learning and Deep learning | Numpy, pandas, matplotlib, Tensorflow | Deep Learning frameworks: PyTorch,Tensorflow,Keras | basic knowledge: Tableau | Scikit-Image | opencv image processing | Microcontrollers programming experience (Arduino, ESP32, ESP8266)

HONOURS AND AWARDS

12/2023
WINNER Smart India Hackathon – Ministry of Education Government of india

Smart India Hackathon 2023 Champion: Led a team to victory in the prestigious Smart India Hackathon 2023, Emerging as the top team among 50,000 participants nationwide.

TECHNICAL BLOGS AND ARTICLES

Technical Blogs and Articles

- Polyp Segmentation Using UNet 3+: A Practical Guide.
- How Deepfake Technology Works: A Deep Dive.
- Build a Human Background Remover Web App Using Python, Flask, OpenCV, and Mediapipe

Link https://medium.com/@kunalchaugule.2003

MANAGEMENT AND LEADERSHIP SKILLS

Strategic Leadership and Problem-Solving Excellence

- Led a team to victory in the **Smart India Hackathon 2023**, showcasing leadership, teamwork, and innovation.
- Managed projects and campaigns, boosting social media engagement by 40% and ensuring high-quality outcomes.
- Mentored team members, fostering collaboration, creativity, and efficient task delegation.
- Applied project management skills to deliver impactful technical and creative solutions on time.

VOLUNTEERING

01/2023 – 12/2023 Saraswati College of Engineering, Kharghar
Core Member - Coding Club

- Organized coding competitions, workshops, and hackathons to promote programming skills and showcase machine learning and computer vision applications.
- Mentored juniors in programming, algorithms, and problem-solving techniques.