

Aryan Agrawal

Linkedin: linkedin.com/in/aryan-agr

Github: github.com/aryan-ml

Email: aryan.agrawalo425@gmail.com

Mobile: +91 9316701038

SKILLS

Languages: Python, C++

Frameworks: TensorFlow, PyTorch, Numpy, Pandas, OpenCV, scikit-learn, Matplotlib, Tkinter

Tools/Platforms: Git, GitHub, Jupyter Notebook, Anaconda, Google Colab, Docker

Soft Skills: Problem-Solving, Attention to detail, Adaptability, Creativity, Innovation

PROJECTS

Deepfake Detection | *OpenCV, PyTorch, TensorFlow, Streamlit, Transfer Learning* | [GitHub](#)

Active' 25

- Collected and structured a paired deepfake dataset (**5 fake + 10 real**), producing ~**1400** labeled face samples through automated frame extraction and MTCNN-based detection.
- Engineered a preprocessing pipeline with standardized cropping (**224x224**), RGB conversion, and manifest creation for consistent, model-ready inputs.
- Benchmarked transfer-learning architectures (**MobileNetV2, ResNet50, EfficientNet-B0, Xception**) to assess accuracy-latency trade-offs for deepfake classification.
- Evaluated models using **ROC-AUC**, confusion matrices, and heatmap visualizations to interpret performance and decision patterns.

Visual Sudoku Solver | *Python, OpenCV, Tkinter, KNN, Joblib* | [GitHub](#)

Apr' 25

- Processed Sudoku images using contour detection, adaptive thresholding, and perspective correction to isolate the grid and extract **81 cells** reliably.
- Recognized digits through **KNN classifier trained on MNIST**, with confidence filtering, ROI validation, and preprocessing logic to reduce misclassification; achieved **96% training and 87% test accuracy**.
- Executed puzzle completion with a **backtracking**-based solver featuring visual animations and state-based color cues for solving, placement, and backtracking.
- Built a full **Tkinter GUI** supporting image upload, digit editing, cell validation, and interactive rendering of the solved puzzle.

Spam/Ham Classification Model | *Scikit-learn, TF-IDF, Logistic Regression* | [GitHub](#)

Jun' 24

- Cleaned and structured a **5,572**-row email dataset by removing null columns, renaming fields, and standardizing class labels for binary classification.
- Converted messages into vectorized features using **TF-IDF**, enabling effective representation of text patterns without manual NLP.
- Trained and evaluated a Logistic Regression classifier, achieving **96.23% accuracy** on the test set with stable performance across splits.
- Built an **end-to-end pipeline** for training, testing, and inference, including model serialization using pickle for portable deployment.

CERTIFICATES

Supervised Machine Learning: Regression and Classification | [Coursera](#)

Nov' 25

CS50 Programming with Python | [Harvard University](#)

Feb' 24

Machine Learning Engineer Google Cloud | [Coursera](#)

Nov' 23

ACHIEVEMENTS

- Secured **6th place out of 300+ teams** in Binary Blitz hackathon
- Ranked in the **top 30%** in a Kaggle machine learning competition.
- Won **1st place** at a local tech exhibition for building a **laser-based microphone system**
- Won **1st place** in a college-level Tech Quiz Competition
- Represented **Gujarat and Maharashtra** in **state-level swimming and badminton**
- Completed multiple **marathons**, demonstrating endurance and long-term discipline

EDUCATION

Lovely Professional University

Phagwara, Punjab

Bachelor of Technology

Aug' 23 – Present

Computer Science and Engineering

Orchids The International School

Mumbai, Maharashtra

Intermediate

Mar' 21 – May' 23

Delhi Public School

Vadodara, Gujarat

Matriculation

Mar' 20 – May' 21