

MATLAB FINAL YEAR IEEE Projects 2023– 2024

Sl.No	Project Code	MATLAB IEEE 2023 – 2024 Project Titles	Algorithm / Method	Lang/Year
1	JPM2301	<u>Brain Tumor Detection and Classification Using Artificial Intelligence</u>	YOLOV2 & MobileNetV2 Architecture.	MATLAB / 2023
2	JPM2302	<u>Classification of Potholes using Convolutional Neural Network Model</u>	GoogLeNet Architecture.	MATLAB / 2023
3	JPM2303	<u>Deep Learning Based Parkinson's Disease Progression Analysis Using DaTscan Images</u>	Inception V3 Model.	MATLAB / 2023
4	JPM2304	<u>Artificial Intelligence based Facial Emotions Analysis for Depression Detection</u>	AlexNet CNN Model.	MATLAB / 2023
5	JPM2305	<u>Grading Of Diabetic Retinopathy Using Deep Learning</u>	CNN Model Architecture.	MATLAB / 2023
6	JPM2306	<u>Identification of Plant Disease from Leaf Images Based on Convolutional Neural Network</u>	AlexNet CNN Model.	MATLAB / 2023
7	JPM2307	<u>Knee Osteoarthritis Detection and Classification Using X-Rays</u>	Faster R-CNN & GoogLeNet.	MATLAB / 2023
8	JPM2308	<u>Weeds and Crop Image Classification using Deep Learning Technique</u>	ResNet50.	MATLAB / 2023
9	JPM2309	<u>URL Based Phishing Website Detection using Machine Learning Models</u>	Support Vector Machine (SVM) and Random Forest	MATLAB / 2023
10	JPM2310	<u>AI-based Gender Identification using Facial Features</u>	AlexNet-CNN	MATLAB / 2023
11	JPM2311	<u>Skin Disease Classification using Deep Learning</u>	VGG16 Architecture.	MATLAB / 2023
12	JPM2312	<u>Driver Drowsiness Detection System Using Image Processing</u>	K-Nearest Neighbors (KNN) and Random Forest.	MATLAB / 2023
13	JPM2313	<u>Classification of Leukemia White Blood Cell Cancer using Image Processing and Machine Learning</u>	K-Nearest Neighbors (KNN)	MATLAB / 2023
14	JPM2314	<u>Age Prediction through Facial Images using Deep Learning</u>	AlexNet CNN Model.	MATLAB / 2023
15	JPM2315	<u>Brain Stroke Classification Through Image Processing and SVM</u>	Support Vector Machine (SVM).	MATLAB / 2023
16	JPM2316	<u>Video-Based Driver Drowsiness Detection System</u>	Support Vector Machine (SVM) and Random Forest.	MATLAB / 2023

17	JPM2317	Enhanced Fog Detection and Visibility Measurement in Adverse Weather Conditions	Image Processing.	MATLAB / 2023
18	JPM2318	Flower Species Detection using Machine Learning Technique	KNN and SVM.	MATLAB / 2023
19	JPM2319	Face Recognition and Expression Detection for the Visually Impaired	K-Nearest Neighbors (KNN).	MATLAB / 2023
20	JPM2320	Night Time Vehicle Detection Using Image Processing and Linear SVM	Linear SVM.	MATLAB / 2023
21	JPM2321	Human Action Recognition using Image Processing and Nearest Mean Classifier	Nearest Mean Classifier (NMC).	MATLAB / 2023
22	JPM2322	Traffic Light Controller System and Road Congestion Detection based on Counting of Vehicles	Gray Level Co-Occurrence Matrix (GLCM).	MATLAB / 2023
23	JPM2323	Secure Authentication System Using Visual Cryptography	Image Processing.	MATLAB / 2023
24	JPM2324	Effective Detection of Copy Move Forgery using HOG and Machine Learning	Support Vector Machine (SVM).	MATLAB / 2023
25	JPM2325	Traffic Sign Detection and Classification using HOG and SVM	Support Vector Machine (SVM).	MATLAB / 2023

For updated titles and other details visit: <https://jpinfotech.org/matlab-image-processing-ieee-projects/>

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OTHER MATLAB FINAL YEAR PROJECTS

Medical Image Processing Projects using MATLAB

Sl.No	Project Code	Project Titles	Domain	Tool (Coding Language)
1	JPM2001	Breast Cancer Detection and Classification	Medical Image Processing	MATLAB
2	JPM1682	Automatic Breast Segmentation and Cancer Detection via SVM in Mammograms	Medical Image Processing	MATLAB
3	JPM1621	Computer Aided Theragnosis Using Quantitative Ultrasound Spectroscopy and Maximum Mean Discrepancy in Locally Advanced Breast Cancer	Medical Image Processing	MATLAB
4	JPM1679	Tumor Detection in Brain MRI Image Using Template based K-means and Fuzzy C-means Clustering Algorithm	Medical Image Processing	MATLAB
5	JPM1789	Brain tumor detection and classification based on two classifier model	Medical Image Processing	MATLAB
6	JPM16103	Brain Tumor Segmentation and Its Area Calculation in Brain MR Images using K-Mean Clustering and Fuzzy C-Mean Algorithm	Medical Image Processing	MATLAB
7	JPM16105	Brain Tumor detection and classification	Medical Image Processing	MATLAB
8	JPM1966	Diabetes Detection based on Iris abnormal	Medical Image Processing	MATLAB
9	JPM1865	Iris Diagnosis – A Quantitative Non-Invasive Tool for Diabetes Detection	Medical Image Processing	MATLAB
10	JPM1717	Automated Diagnosis of Glaucoma Using Empirical Wavelet Transform and Correntropy Features Extracted from Fundus Images	Medical Image Processing	MATLAB
11	JPM1719	Retinal Disease Screening through Local Binary Patterns	Medical Image Processing	MATLAB
12	JPM1772	Glaucoma Detection from Fundus Images Using MATLAB GUI	Medical Image Processing	MATLAB
13	JPM1784	Blood Vessel Segmentation in Fundus Images and Detection of Glaucoma	Medical Image Processing	MATLAB
14	JPM1785	Blood Vessel Segmentation in Fundus Images and Detection of Glaucoma using SVM	Medical Image Processing	MATLAB
15	JPM1625	Red Lesion Detection Using Dynamic Shape Features for Diabetic Retinopathy Screening	Medical Image Processing	MATLAB

16	JPM1771	Bagged textural and color features for melanoma skin cancer detection in dermoscopic and standard images	Medical Image Processing	MATLAB
17	JPM1970	System to predict the gestational age and extracting the features such as length of the fetus and its orientation	Medical Image Processing	MATLAB
18	JPM1775	Automatic Classification of Intracardiac Tumor and Thrombi in Echocardiography based on Sparse Representation	Medical Image Processing	MATLAB
19	JPM1623	Real-Time Automatic Artery Segmentation, Reconstruction and Registration for Ultrasound-Guided Regional Anaesthesia of the Femoral Nerve	Medical Image Processing	MATLAB
20	JPM1670	Automatic Hookworm Detection in Wireless Capsule Endoscopy Images	Medical Image Processing	MATLAB
21	JPM1620	An Automatic Learning-Based Framework for Robust Nucleus Segmentation	Medical Image Processing	MATLAB

Face Recognition Projects using MATLAB

Sl.No	Project Code	Project Titles	Domain	Tool (Coding Language)
1	JPM1971	Deep Learning for Face Recognition under Complex Illumination Conditions Based on Log-Gabor and LBP	Image Processing (Face Recognition)	MATLAB
2	JPM1807	Topology Preserving Structural Matching for Automatic Partial Face Recognition	Image Processing (Face Recognition)	MATLAB
3	JPM1706	Facial Age Estimation with Age Difference	Image Processing (Face Recognition)	MATLAB
4	JPM1710	Simultaneous Feature and Dictionary Learning for Image Set Based Face Recognition	Image Processing (Face Recognition)	MATLAB
5	JPM1786	Automated human identification using partial face image	Image Processing (Face Recognition)	MATLAB
6	JPM1607	Aging Face Recognition: A Hierarchical Learning Model Based on Local Patterns Selection	Image Processing (Face Recognition)	MATLAB
7	JPM1609	Facial Sketch Synthesis Using Two-dimensional Direct Combined Model-based Face-Specific Markov Network	Image Processing (Face Recognition)	MATLAB
8	JPM1612	Robust Point Set Matching for Partial Face Recognition	Image Processing (Face Recognition)	MATLAB

9	JPM1506	Face Recognition across Non-Uniform Motion Blur, Illumination, and Pose	Image Processing (Face Recognition)	MATLAB
10	JPM1507	Face Sketch Synthesis via Sparse Representation-Based Greedy Search	Image Processing (Face Recognition)	MATLAB
11	JPM1412	Mining Weakly Labeled Web Facial Images for Search-Based Face Annotation	Image Processing (Face Recognition)	MATLAB
12	JPM1777	Crime Detection using Facial Features	Image Processing (Face Recognition)	MATLAB

Facial Expression based Projects using MATLAB

Sl.No	Project Code	Project Titles	Domain	Tool (Coding Language)
1	JPM1711	A Facial-Expression Monitoring System for Improved Healthcare in Smart Cities	Image Processing (Facial Expression)	MATLAB
2	JPM1614	Dynamic Facial Expression Recognition With Atlas Construction and Sparse Representation	Image Processing (Facial Expression)	MATLAB
3	JPM1515	Robust Representation and Recognition of Facial Emotions Using Extreme Sparse Learning	Image Processing (Facial Expression)	MATLAB
4	JPM1317	Local Directional Number Pattern for Face Analysis: Face and Expression Recognition	Image Processing (Facial Expression)	MATLAB

Agriculture based Projects using MATLAB

Sl.No	Project Code	Project Titles	Domain	Tool (Coding Language)
1	JPM1967	Classification of Chikoo (Sapota) Fruits on basis of RGB colour space using Digital Image Processing	Digital Image Processing	MATLAB
2	JPM1969	Machine vision based sorting of Chikoo (sapota) fruit of Dahanu taluka region using Digital Image Processing	Digital Image Processing	MATLAB
3	JPM1764	Higher Order Dynamic Conditional Random Fields Ensemble for Crop Type Classification in Radar Images	Digital Image Processing	MATLAB
4	JPM1859	Feature based transition region extraction for image segmentation: Application to worm separation from leaves	Digital Image Processing	MATLAB

Image Forensics based Projects using MATLAB

Sl.No	Project Code	Project Titles	Domain	Tool (Coding Language)
1	JPM1858	Image Forgery Detection	Digital Image Processing	MATLAB
2	JPM1652	Illuminant-Based Transformed Spaces for Image Forensics	Digital Image Processing	MATLAB
3	JPM1671	Analyzing the Effect of JPEG Compression on Local Variance of Image Intensity	Digital Image Processing	MATLAB
4	JPM1513	Revealing the Trace of High-Quality JPEG Compression through Quantization Noise Analysis	Digital Image Processing	MATLAB
5	JPM1322	Revealing the Traces of JPEG Compression Anti-Forensics	Digital Image Processing	MATLAB

Transportation System based Projects in MATLAB

Sl.No	Project Code	Project Titles	Domain	Tool (Coding Language)
1	JPM1677	Traffic Light Controller System using Counting of Vehicles in MATLAB	Digital Image Processing	MATLAB
2	JPM2002	Car detection in real time environment during fog hazy day	Digital Image Processing	MATLAB
3	JPM1863	Smart Traffic Detection System Using Canny Edge Detection	Digital Image Processing	MATLAB
4	JPM1736	A Practical Animal Detection and Collision Avoidance System Using Computer Vision Technique	Digital Image Processing	MATLAB
5	JPM1737	A Robust and Efficient Approach to License Plate Detection	Digital Image Processing	MATLAB
6	JPM1738	Accurate Detection and Recognition of Dirty Vehicle Plate Numbers for High-Speed Applications	Digital Image Processing	MATLAB
7	JPM1781	Night Time Vehicle detection and tracking based on SVM	Digital Image Processing	MATLAB
8	JPM1783	License Plate deblurring and detection	Digital Image Processing	MATLAB

9	JPM1668	Robust Blur Kernel Estimation for License Plate Images From Fast Moving Vehicles	Digital Image Processing	MATLAB
10	JPM1694	An Improved Traffic Signs Recognition and Tracking Method for Driver Assistance System in MATLAB	Digital Image Processing	MATLAB
11	JPM1861	Moving Object Tracking Under Occlusion Using Hybrid Model	Digital Image Processing	MATLAB
12	JPM1226	Principal Visual Word Discovery for Automatic License Plate Detection	Digital Image Processing	MATLAB
13	JPM1318	Log-Gabor Filters for Image-Based Vehicle Verification	Digital Image Processing	MATLAB

Biometric based Projects in MATLAB

Sl.No	Project Code	Project Titles	Domain	Tool (Coding Language)
1	JPM1701	Deep Representation based feature extraction and recovering for Finger-vein verification	Digital Image Processing	MATLAB
2	JPM1708	Learning Correspondence Structures for Person Re-identification	Digital Image Processing	MATLAB
3	JPM1788	Image Registration and re-verification process with Pattern Recognition Techniques	Digital Image Processing	MATLAB
4	JPM1601	A Security-Enhanced Alignment-Free Fuzzy Vault-Based Fingerprint Cryptosystem Using Pair-Polar Minutiae Structures	Digital Image Processing	MATLAB
5	JPM1602	Distance-Based Encryption: How to Embed Fuzziness in Biometric-Based Encryption	Digital Image Processing	MATLAB
6	JPM1603	Fingerprint Liveness Detection From Single Image Using Low-Level Features and Shape Analysis	Digital Image Processing	MATLAB
7	JPM1605	Iris Recognition Based on Human-Interpretable Features	Digital Image Processing	MATLAB
8	JPM1683	Automated Human Identification Using Ear Imaging	Digital Image Processing	MATLAB
9	JPM1518	Detection and Rectification of Distorted Fingerprints	Digital Image Processing	MATLAB
10	JPM1402	An Efficient Parallel Approach for Sclera Vein Recognition	Digital Image Processing	MATLAB

11	JPM1505	Combining Left and Right Palmprint Images for More Accurate Personal Identification	Digital Image Processing	MATLAB
12	JPM1408	Fingerprint Compression Based on Sparse Representation	Digital Image Processing	MATLAB
13	JPM1303	Adaptive Fingerprint Image Enhancement With Emphasis on Preprocessing of Data	Digital Image Processing	MATLAB

Object Detection and Recognition based Projects in MATLAB

Sl.No	Project Code	Project Titles	Domain	Tool (Coding Language)
1	JPM1745	An Image-Based Approach to Detection of Fake Coins	Digital Image Processing	MATLAB
2	JPM1768	Multiple Moving Object Detection From UAV Videos Using Trajectories of Matched Regional Adjacency Graphs	Digital Image Processing	MATLAB
3	JPM1754	Learning Spatio-Temporal Information for Multi-Object Tracking	Digital Image Processing	MATLAB
4	JPM1770	Robust Visual Tracking via Incremental Subspace Learning and Local Sparse Representation	Digital Image Processing	MATLAB
5	JPM1615	A Feature Learning and Object Recognition Framework for Underwater Fish Images	Digital Image Processing	MATLAB
6	JPM1648	Detection of Moving Objects Using Fuzzy Color Difference Histogram Based Background Subtraction	Digital Image Processing	MATLAB

Data Hiding / Steganography / Watermarking / Image Security based Projects in MATLAB

Sl.No	Project Code	Project Titles	Domain	Tool (Coding Language)
1	JPM1922	Commutative Encryption and Data Hiding in HEVC Video Compression	Digital Image Processing	MATLAB
2	JPM1927	New Framework of Reversible Data Hiding in Encrypted JPEG Bitstreams	Digital Image Processing	MATLAB
3	JPM1857	Data hiding scheme based on pixel-value differencing in dual images	Digital Image Processing	MATLAB
4	JPM1742	Chaos-based fast colour image encryption scheme with true random number keys from environmental noise	Digital Image Processing	MATLAB

5	JPM1769	A Video Watermarking DRM Method Based on H.264 Compressed Domain with Low Bit-Rate Increase	Digital Image Processing	MATLAB
6	JPM1773	A high payload steganographic algorithm based on edge detection	Digital Image Processing	MATLAB
7	JPM1779	Reversible Data Hiding in Encrypted Images Based on Progressive Recovery	Digital Image Processing	MATLAB
8	JPM1782	Modified Buyer Seller Watermarking Protocol based on Discrete Wavelet Transform	Digital Image Processing	MATLAB
9	JPM1678	Data Security using Cryptography and Steganography	Digital Image Processing	MATLAB
10	JPM16100	Implementation and performance analysis of DCT DWT SVD based watermarking algorithms for Color images	Digital Image Processing	MATLAB
11	JPM1516	Steganography Using Reversible Texture Synthesis	Digital Image Processing	MATLAB
12	JPM1405	Digital Image Sharing by Diverse Image Media	Digital Image Processing	MATLAB
13	JPM1419	A Compressive Sensing based Secure Watermark Detection and Privacy Preserving Storage Framework	Digital Image Processing	MATLAB
14	JPM1202	A Novel Data Embedding Method Using Adaptive Pixel Pair Matching	Digital Image Processing	MATLAB
15	JPM1203	A Probabilistic Model of Visual Cryptography Scheme With Dynamic Group	Digital Image Processing	MATLAB
16	JPM1204	A Secret-Sharing-Based Method for Authentication of Grayscale Document Images via the Use of the PNG Image With a Data Repair Capability	Digital Image Processing	MATLAB
17	JPM1221	Robust Watermarking of Compressed and Encrypted JPEG 2000 images	Digital Image Processing	MATLAB
18	JPM1667	Two-Level QR Code for Private Message Sharing and Document Authentication	Digital Image Processing	MATLAB
19	JPM1674	Securing Digital Data using 256-bit Multimodal Biometrics based Cryptographic Key	Digital Image Processing	MATLAB
20	JPM1216	Low Distortion Transform for Reversible Watermarking	Digital Image Processing	MATLAB
21	JPM1523	A Novel (K,N) Secret Sharing Scheme from Quadratic Residues for Grayscale Images	Digital Image Processing	MATLAB

22	JPM1401	A New Secure Image Transmission Technique via secret fragment visible mosaic images	Digital Image Processing	MATLAB
23	JPM1404	Designing an Efficient Image Encryption – Then- Compression System	Digital Image Processing	MATLAB

Video Processing based Projects in MATLAB

Sl.No	Project Code	Project Titles	Domain	Tool (Coding Language)
1	JPM1968	A Novel Approach Towards Dynamic And Scalable Video Communication Using OFDMA and C-OFDMA Schemes over Wireless 4G Networks	Digital Image Processing	MATLAB
2	JPM1765	Automatic Detection of 3D Quality Defects in Stereoscopic Videos Using Binocular Disparity	Digital Image Processing	MATLAB
3	JPM1766	Salient object detection with spatiotemporal background priors for video	Digital Image Processing	MATLAB
4	JPM1639	Patch-Based Video Denoising With Optical Flow Estimation	Digital Image Processing	MATLAB
5	JPM1672	Blind Super Resolution of Real-Life Video Sequences	Digital Image Processing	MATLAB

Other Digital Image Processing based Projects in MATLAB

Sl.No	Project Code	Project Titles	Domain	Tool (Coding Language)
1	JPM1860	Holoentropy measures for image stitching of scenes acquired under CAMERA unknown or arbitrary positions	Digital Image Processing	MATLAB
2	JPM1864	An Accurate Multi-Row Panorama Generation Using Multi-Point Joint Stitching	Digital Image Processing	MATLAB
3	JPM1721	Fast Image Dehazing Method Based on Linear Transformation	Digital Image Processing	MATLAB
4	JPM1725	A Hierarchical Approach for Rain or Snow Removing in A Single Color Image	Digital Image Processing	MATLAB
5	JPM1726	Contrast Enhancement Based on Intrinsic Image Decomposition	Digital Image Processing	MATLAB

6	JPM1727	Cartoon and Texture Decomposition based Color Transfer for Fabric Images	Digital Image Processing	MATLAB
7	JPM1761	Words Matter: Scene Text for Image Classification and Retrieval	Digital Image Processing	MATLAB
8	JPM1787	WLS filter based cartoon and texture decomposition for color transfer in fabric images	Digital Image Processing	MATLAB
9	JPM1417	Characterness An Indicator of Text in the Wild	Digital Image Processing	MATLAB
10	JPM1618	Interactive Image Segmentation Using Adaptive Constraint Propagation	Digital Image Processing	MATLAB
11	JPM1632	FRESH—FRI-Based Single-Image Super-Resolution Algorithm	Digital Image Processing	MATLAB
12	JPM1641	Blind Quality Assessment of Tone-Mapped Images Via Analysis of Information, Naturalness, and Structure	Digital Image Processing	MATLAB
13	JPM1643	Contrast Enhancement by Nonlinear Diffusion Filtering	Digital Image Processing	MATLAB
14	JPM1660	One-Class Writer-Independent Offline Signature Verification Using Feature Dissimilarity Thresholding	Digital Image Processing	MATLAB
15	JPM1673	Sensor Pattern Noise Estimation Based on Improved Locally Adaptive DCT Filtering and Weighted Averaging for Source Camera Identification and Verification	Digital Image Processing	MATLAB
16	JPM1676	A Mixed Generative-Discriminative Based Hashing Method	Digital Image Processing	MATLAB
17	JPM1501	A Feature-Enriched Completely Blind Image Quality Evaluator	Digital Image Processing	MATLAB
18	JPM1503	A Probabilistic Approach for Color Correction in Image Mosaicking Applications	Digital Image Processing	MATLAB
19	JPM1509	Image Denoising by Exploring External and Internal Correlations	Digital Image Processing	MATLAB
20	JPM1510	Image Super-Resolution Based on Structure-Modulated Sparse Representation	Digital Image Processing	MATLAB
21	JPM1511	Multifocus Image Fusion Based on NSCT and Focused Area Detection	Digital Image Processing	MATLAB
22	JPM1517	Variable-Length Signature for Near-Duplicate Image Matching	Digital Image Processing	MATLAB

23	JPM1520	Single Image Superresolution Based on Gradient Profile Sharpness	Digital Image Processing	MATLAB
24	JPM1409	Hyperspectral Image Classification Through Bilayer Graph Based Learning	Digital Image Processing	MATLAB
25	JPM1410	Images as Occlusions of Textures A Framework for segmentation	Digital Image Processing	MATLAB
26	JPM1413	Phase-Based Binarization of Ancient Document Images: Model and Applications	Digital Image Processing	MATLAB
27	JPM1414	Progressive Image Denoising Through Hybrid Graph Laplacian Regularization : A Unified Framework	Digital Image Processing	MATLAB
28	JPM1310	Context-Dependent Logo Matching and Recognition	Digital Image Processing	MATLAB
29	JPM1326	Scene Text Detection via Connected Component Clustering and Nontext Filtering	Digital Image Processing	MATLAB

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