

MATLAB FINAL YEAR IEEE Projects 2023– 2024

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

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

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 |

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|----|---------|--|--------------------------|--------|
| 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 |

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| 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 |

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| 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 |

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| 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 |

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| 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 |

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| 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 |

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| 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 |
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| 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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