

Heaven's Light is Our Guide
Rajshahi University of Engineering & Technology
Department of Mechatronics Engineering
 Session: 2013-2014

Thesis Title

Sl. No.	Thesis Title	Student Roll
01	Fractional Order Robust PID Controller Design for Voltage Control of Islanded Microgrid	138009 138020
02	Design and Development of Vehicle Mounted Wind Turbine Generation System	138010 108023
03	Design and Development of Autonomous Aerial Vehicle	138005 138018
04	Stability Analysis for Interconnected Nonlinear System With 'Mixed' Negative - Imaginary	138008
05	Improved Vision in Inclement Weather for Self-Driving Cars Using CNN	138013 138015 138026
06	An Artificial Neural Network Based Approach to the Estimation of Transmission Line Fault Location	138014 138022
07	Design and Development of WSN-IOT Framework for Home Automation	138011 138024
08	Design and Development of Gesture and Smart Phone Controller Wheel Chair for Disabled	138001 138016
09	Deep Neural Network Based Image Recognition	138017 138019
10	An Improved Design of Surface Plasmon Resonance Biosensor Based on Graphene with TiO ₂ and Gold Nanoparticle for Immune Sensing	138006 138029
11	Robust Integral Linear Quadratic Gaussian Controller Design for Nonlinear Single Machine Infinite Bus Power System	138012
12	Convolutional Neural Network Based Paddy Plant Disease Recognition	138003 138027

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Session: 2014-2015

Thesis Title

Sl. No.	Thesis Title	Student Roll
01	Design and Development of an Advanced Biometric Automated Teller Machine for Secured e-Banking System in Bangladesh	148021 148029
02	Environment Condition Monitoring and Long-Distance Actuator Control Using Wireless Sensor Network (WSN)	148004 148007
03	Smart Automated Home for Disable People Using PLC	148001 148015
04	Development of Real-Time Vehicle Occupancy Tracking System in a Parking Lot Using Deep Learning	148022 148030
05	Robust Fuzzy Logic Controller for Power, Voltage and Frequency Control of Multi Level Distributed Generation Based Three-Phase Island Microgrid	148017
06	Design of a Novel Blended State Estimated Adaptive Controller for Voltage and Current Control of Microgrid against Unknown Noise	148013 148018
07	Controlling the Movement of a Sel-Driving Vehicle by Hand Gesture Using Leap Motion Controller	148016 148025
08	Modeling and Development of 3 DoF Color Sorting Robotic Manipulator Using Arduino	148011 148020
09	Analyzing Text to Develop Interactive Conversation Agent Using NMT and Sentiment Analysis Using Multi-Channel Combination of CNN and LSTM	148005 148027
10	Design and Development of a Magnetic Levitation System Using Zero Power Control	148023 148025 148026
11	Plant Detection Based on Leaf Recognition Using Multi Level residual Network and Progressive Neural Architecture Search	148024
12	Convolutional Neural Network Based Person Specific Face Recognition & Detection	148019 148028
13	Development of a Servo Based Mouse Controlled Robotic Wrist	148006 148012
14	Optimum Design and Prototyping of Small Wind Turbine Blade to Extract Maximum Wind Energy with Automatic Wind Flow Detection	148002 148003
15	Voice Controlled Multi-Functional Home Automation System	148014 138030

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Session: 2015-2016

Thesis Title

Sl. No.	Thesis Title	Student Roll
01	Data Driven Model Predictive Control Design to enhance Tracking Accuracy and Power Quality of a Solar Based Microgrid under Uncertain Loads	1508003 1508010
02	Controlling a Prosthetic hand using EMG Signal	1508026 1508030
03	Performance Improvement of Domestic Refrigerator Through Suction Line Heat Exchanger Design	1508019 1508020
04	Design and Development of a Robotic Arm for Classifying Tomato Leaf Diseases & Spraying Pesticides on Affected Leaf	1508002 1508015
05	A Novel Approach to Extractive Question Answering Chatbot in Bangla Using Bidirectional Encoder Presentation from Transformer	1508007 1508012
06	Smart Agriculture Monitoring and Control Using Internet of Things (IOT) in Greenhouse	1508025 148010
07	Deep Learning-Based Condition Monitoring & fault Diagnosis of a Motor Gear Test Rig	1508004 1508016
08	Optimum Design and Performance Evaluation of a Solar Panel with Automatic Sun Tracking System	1508022 1508028
09	Speed Bump & Pothole detection with Single Shot Multibox Detector Algorithm & Spped Control for Autonomous Vehicle	1508013 1508017
10	Image Processing and Convolutional Neural Network based Approach for Detecting Lane and Objects of an Autonomous Car	1508014 1508027
11	Computer Vision Based Translator for Bangla Sign Language Characters	1508006 1508008
12	Machine Vision Based Eye Gaze Controlled Virtual Keyboard for People with Neuromotor Impairments	1508011 1508018
13	Design and Development of PLC Based Training Modules for the Department of Mechatronics Engineering of RUET	1508024 138004
14	Optimum Blade Design of Pinwheel Type Horizontal Axis Wind Turbine for Low Wind Speed Areas	1508023 1508029

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Session: 2016-2017

Thesis Title

Sl. No.	Thesis Title	Student Roll
01	A modified Soft-Actor Critic for Network autonomous navigation of an industrial mobile robot	1608001 1608023
02	Three-Phase Inverter Fault Diagnosis using Deep Belief Network and Fault Tolerant Control using PID Controller for Photovoltaic Applications	1608002 1608025
03	Vision Based Human Activity Recognition using CNN-LSTM Algorithm	1608003 1608005
04	A Deep Generative Model Aided Intelligent Framework for Health Condition Evaluation of High Voltage Power Transformer	1608006 1608016
05	Novel Phuti Karpas Plant Leaf Disease Classification using Few-Shot Learning Technique	1608007 1608013
06	Performance estimation of Savonius wind turbine blade. An application of Artificial Neural Network	1608008
07	A hybrid approach to mammography processing and lesion classification	1608009 1608015
08	A Decisive Intelligence Aided Meta-heuristic Deep Learning Framework in High-impedance Fault and Power Swing Fault Diagnosis of Grid Transmission Lines	1608010 1608024
09	A Computer Aided Diagnosis System for Parkinson's Disease Using Residual Neural Network	1608011 1608012
10	Li-ion Battery Remaining Useful Life Prediction Using Convolutional Neural Network with Bat-Based Particle Filter	1608014 1608026
11	Short Term Wind Speed Prediction Using Artificial Neural Network	1608018 1608029
12	Skin Cancer Diagnosis based on Deep Convolutional Neural Network (DCNN)	1608019 1608021
13	Graph Convolutional Co- ordinate Attention Network for Hyperspectral Image Classification	1608020 1608022
14	Bearing Fault Diagnosis Using Grasshopper Optimization Algorithm Based Support Vector Machine (GOA-SVM)	1608027 1608030

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Thesis Title

Sl No.	Thesis Title	Student Roll
01	Design, Development, Assessment, and Implementation of an Electric Digital Twin Grid Framework	1708019 1708022
02	Machine Learning Based Approach Power Grid Transformer Life Cycle Forecasting	1708026 1708036
03	Real-Time Sign Language to Speech Generation Utilizing Mobile Device	1708006 1708039
04	Design of Advanced Data Driven Frequency Controller for a Microgrid	1708017 1708021
05	A Digital Twin-Assisted Hybrid Approach to Optimal Trajectory Planning for Serial Manipulators under Temporal Feedback Decay.	1708033 1708058
06	Design, Optimization and Control of Transformerless inverter for Grid Resilience with Renewable Energy	1708001 1708029
07	Transformer based Approach for Detecting Adverse Drug Events from Social Media Data	1708020 1708060
08	Remaining Useful Life Prediction of Aircraft Turbofan Engine for Commercial Modular Aero-propulsion Systems using Deep Learning	1708018 1708046
09	A Self-attentive Graph Convolutional Neural Network for Supply Chain Risk Management	1708009 1708010
10	Blind Guidance Using Object Perception and Auditory Augmented Reality	1708005 1708008
11	Deep Learning Based Acute Lymphoblastic Leukemia Detection From Bone Marrow Smears	1708004 1708012
12	Design of A Quantum Secured Electric Grid: Cryptographic and Computing Approach	1708032 1708059
13	Detection of Ovarian Cyst Using SVM & CNN Classifier on MATLAB Based GUI Platform	1708041 1708043
14	Person Identification and Re-Identification by Gait using Non-Overlapping Surveillance Cameras	1708024 1708025
15	An approach to develop digital twin technology for fault diagnosis of gearboxes for a four-wheel drive vehicles	1708050 1708053
16	Machine Learning approach in fault diagnosis of bearing for smart manufacturing	1708040 1708056
17	Utilizing Optimization and Machine Learning Prediction Techniques for Optimal Operation of a Solar-Power Integrated Captive Power Plant with a Cogeneration Grid	1708011 1708023
18	Physician's Prescribed Handwriting Recognition Using Image Processing and Deep Learning Algorithms	1708013 1708038
19	Performance Analysis Over RIS-aided Hybrid RF/FSO Systems in the Presence of Eavesdropping Attack	1708045 1708049

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Thesis Title

SI No.	Thesis Title	Student Roll
01	Implementation of Bangla Sign Language (BdSL) Recognition in Continuous Real Time	1808002 1808015
02	Detecting Physical Altercation in Public Space: Design, Development and Experimental Validity	1808004
03	Exploring the potential of deep learning for real time low light image enhancement	1808005 1808006
04	A Framework of a Voice Recognizing Automated Arm	1808007 1808009
05	Design of machine learning based cyber-attack detection and mitigation system in microgrid	1808008 1808009
06	Autonomous Machine Learning based Multi-Purpose Tactical Unmanned Quad-bot to Reduce Human Casualty.	1808010 1808027
07	An Optimized Ticket Allocation and Efficient Utilization of Unsold Train Tickets in Quota-based Systems: Design, Development and Experimental Validity	1808011
08	Revolutionizing Fruit Quality Control: Design & Development Of An Automated Robotic System with Machine Vision & Machine Learning.	1808012 1808017
09	Extended Reality environment control through motion gesture recognition.	1808014 1808055
10	Improving the Accuracy and Comparative Analysis of Different Machine Learning Algorithms for Phuti Karpas Leaf Disease Detection	1808018 1808050
11	TinyML based Anomaly Detection for Autonomous Mobile Robots.	1808019 1808041
12	Autonomous Medical Robot with Patient Monitoring System.	1808020 1808043
13	Design and Implementation of Thermal Comfort and Pain Management for Patients with Methicillin-resistant Staphylococcus aureus (MRSA) Infections Using IoT Technology	1808021 1808028
14	Machine Learning Model Compression for TinyML Implementation	1808022 1808023
15	Design and Development of a Web Framework for Cotton Leaf Disease Classification Implementing Deep Learning	1808024 1808026
16	Design of a Machine Learning Based Low-Cost Predictive Maintenance System of a compressor	1808024 1808026
17	Next-Gen Adaptive Anomaly Detection Strategies for Robust Substation Cybersecurity	1808029 1808057
18	Design & Implementation of a Collision Avoidance System for Autonomous Vehicle using Different Sensors and Machine Learning.	1808030 1808049
19	Origin Classification of Blood Clots in Ischemic Stroke and Treatment Plan Generation to Reduce the Likelihood of Another Stroke	1808031 1808035
20	Knowledge Graph Embedding with Natural Language Processing	1808032 1808042
21	A Deep Learning Framework to Recognize Sensor Based Human Activity: Design, Development and Experimental Implementation.	1808033 1808056
22	Edge computing based decentralized storage system using blockchain technology: additional security, scalability and efficiency enhancement	1808034 1808059
23	Design and development of a real time food nutrition value classification and recommender system.	1808036 1808045
24	Design and implementation of a blockchain-based micro grid and energy management system for solar system.	1808037 1808047
25	Design, Development and Control of a Pinwheel Type Horizontal Axis Wind Turbine for Low-Speed Wind Area	1808038 1808040

		1808048
26	Wireless charging featured Multi-controlled Robot using IPS Technology.	1808044 1808046
27	Design and Implementation of Speech Emotion Analyzer Using NLP	1808051 1808053
28	Designing and Developing NLP Based Model to Diagnose Mental Health Conditions from Speech Patterns	1808054 1808058
29	Machine learning based low-cost LED Cricket Stamp's performance analysis	1808060