| Sr. No | Name of the Project  |
|--------|--|
| 1      | Enahnced Capacity of Pile Foundation by Skin Resistance                                    |
|        | Investigating a road network with and without lane changing of rickshaws                   |
| 2      | drivers: A case of Charsadda road, Peshawar  |
|        | Sustainable utlization of demolished cement concrete in reinforced                         |
| 3      | cocnrete member  |
| 4      | performance Evaluation of Interlock Bricks Masonary Systems                                |
|        | Concept and Mission Design of a Small Space Tug Satellite for Debris                       |
| 5      | Remedation in low earth Orbit  |
| 6      | 3D Printer Based on FDM  |
| 7      | Automatic Book Scanner   |
| 8      | Deep Learning based Automatic Module Classification  |
| 9      | IOT Based unmanned Armed Ground Vehicle  |
| 40     | DESIGN AND DEVELOPMENT OF PROTOTYPE OF IOT SENSORS   |
| 10     | BASED SMART FARM IRRIGATION SYSTEM   |
| 11     | Tillage and Seeding Depth Monitoring System for Seeders                                    |
| 12     | Development and construction of a offgrid PV For small scale house electricity production. |
| 13     | Design and Development of Smart Field Lysimeter  |
| 14     | Sensor based automatic Spot Specific sprayer for orchards                                  |
| 17     | Irrigation pond water quality monitoring by using wireless sensor network                  |
| 15     | Imigation pond water quality monitoring by using wheless sensor hetwork                    |
| 16     | Smart GPS Based Variable Rate Fertilizer Spreader  |
|        | Development and Performance Evalaution of Mini Ground Nuts PoD                             |
| 17     | Picker   |
|        | Balanced Power Amplifier for 5G Medical Applications in GaN Technology                     |
| 18     |  |
|        | IMAGE FEATURE EXTRACTION IN A VISUALLY ASSISTED SMART                                      |
| 19     | TRIAL FOR HIP/KNEE JOINT ARTHROPLASTY  |
| 20     | PORTABLE LAB SOLUTION FOR FLUID QUALITY ASSESSMENT   |
| 20     | BUITEMS SELF-DRIVING SHUTTLE ON CAMPUS   |
| 21     | Behavioral cloning of perception and action for a physical mobile robot                    |
| 22     | Benavioral cioning of perception and action for a physical mobile robot                    |
| 23     | Smart Attendance Management System(Computer Vision)  |
| 24     | SMART MAINTANCE SYSTEM OF FISH TANK USING AUDRIUNO   |
| 25     | SMART HELMET   |
| 26     | Atmospheric Water Generator for Public Water Disipenser                                    |
| 27     |  |
|        | Design and Development of IOT Based Smart Solar Irrigation Monitoring                      |
| 28     | and Controlling System   |
|        | Automatic Smart Electrical Power Control System with Enhanced Features                     |
| 29     | using Microcontroller  |
| 30     | Design and Manufactpuring of low cost SCARA robot  |
| 31     | Custom-buitl low pediatric gait trainer  |
|        | INTERACTIVE VOICE RECOGNITION BASED MULTIFUNCTIONING                                       |
| 32     | SMART MIRROR USING IOT   |

| r          | DECIONING AND DEVELOPMENT OF OLOUD DACED LT                                   |
|------------|---|
|            | DESIGNING AND DEVELOPMENT OF CLOUD BASED IOT                                  |
| 22         | INFRASTRUCTURE FOR REMOTE PATIENT HEALTH MONITORING                           |
| 33         | Design and Eshvication of Law Cost 2D Drieton                                 |
| 34         | Design and Fabrication of Low-Cost 3D Printer                                 |
| 35         | Designing a control mechanism for an anthropomorphic hand                     |
| 36         | IoT Equipped and AI enabled WSN nodes for Precision Agriculture               |
| 37         | Automatic Electronic Voting System  |
| 38         | Counter Rotating Wind Energy Generator for DC Micro Grid                      |
| 39         | Smart Glove Hand Gesture Vocalizer for Deaf and Dumb                          |
| 40         | Development of Aluminium winding Three Phase Induction Motot for              |
| 40         | Lightweight EV Applications   |
| 41         | A Hand Gesture Based Robotic Controlled Vehicle                               |
| 42         | Design and analysis of Slotless permanent magnet brushless DC (PMBLDC) motor  |
| 43         | High Efficiency Irrigation system (HEIS) in outskirts of a city               |
| 44         | Treatment of used ablution (wazu) from Masjid for reuse                       |
|            | DEEP (Development Education Empowerment Progress) – A skill-training          |
|            | programme of DSU for making the youth living near outskirts of Karachi,       |
|            | coming from underprivileged families, to turn proficient with technical know- |
| 45         | how & learn basics of construction.   |
|            | Design and Analysis if Photovolatic Powered Reverse Osmosis                   |
| 46         | Desalination System   |
| 4-         | Design and Fabrication of a highly efficient solar water heating using        |
| 47         | nanoparticles   |
| 48         | Water Crises and Rain Water Harvesting in DHA, Karachi                        |
| 49         | Unconvential and aesthetic 5-seater Electric Tri whealer                      |
| 50         | IoT Based Weather Monitoring System   |
| 51         | Al based traffic signal control system  |
| 52         | Portable Diabetes Type 1 Solution (Open APS)                                  |
| <b>5</b> 0 | Application of FEM and AI for response-based assessment of RC beam-           |
| 53         | colum connections   |
|            | Flexural Strength Evaluation of Bamboo Reinforced concrete using the          |
| 54         | finite Element Method (FEM) and Gene Expression Programming (GEP)             |
| 55         | Hybro Bike with Digi Featurs  |
| 56         | Design and Dveleopment of a IoT Based Robot Vec                               |
| 57         | loT Enabled Livestock Health Monitoring Data logger.                          |
| 58         | Lemon Grading and Sorting Machine   |
| - 30       | Smart Single phase Power Factor Correction system for Domestic user           |
| 59         | Omart oringie phase i ower i actor correction system for Domestic user        |
|            | Design of energy efficient house with semi passive cooling / heating          |
|            | system by using   |
| 60         | wind towers and underground water cisterns                                    |
| 61         | Remotely Controlled Agricutlure Pesticide Spraying Robot                      |
|            | Desing of ultra-Flexible Skin Uke Al Augmented Sensor Fusion for Human        |
| 62         | Wearable Monitoring of OSTEOARTHITIES   |
|            | Design and Fabrication of Soft Robotic Hand with Embodied Sensing for         |
| 63         | Motion Imapired Humans  |

|      | Fabrication of soft and comfortable pressure sensing shoe sole for      |
|------|---|
| 64   | intutitive Monitoring of Human Quality Gait                             |
| 65   | Date Fruit Classification using Machine Learning                        |
| - 00 | Design and Development of Soft Robotics Kit for Educational Training    |
| 66   | Design and Development of Soft Robotics Rit for Educational Training    |
| 67   | Portable Solar Water Generator for Remote Application                   |
| 68   |   |
| 00   | An Artifical Intelligence based Sar-sabz pakistan                       |
| 69   | Design and Prototype of SVC (FC-TCR) for Power Factor Improvement       |
| 70   | Embadad Intelligence Pased Partable urafleumetry Device                 |
| 70   | Embeded Intelligence Based Portable uroflowmetry Device                 |
| 71   | Aritficial Intelligence Based Green House Management System for         |
| 72   | precision Agriculutre   |
|      | Al based Deforestation identification using Drone Imagery               |
| 73   | RGB Sensor-Based Drome Imagery for Crop Health Assessment               |
| 71   | IOT Assistted Smart Glove Communication Device for Hearing-Impaired     |
| 74   | Person  |
| 75   | Artificial Intelligence Based Robot Assistant for Elederly care         |
| 70   | Artificial Intelligence Based Cable-Driven Robot for Plant Health       |
| 76   | Assessment in a vertical Framing Environment                            |
| 77   | IoT Based Building Management and Safety System                         |
| 78   | Hybrid Charging stattion for Electric Vehicles                          |
| 79   | IoT based Health Care service Robot                                     |
| 80   | Automatic Traffic Flow Control and Violation Detection                  |
| 81   | Water surface cleaning and quality monitoring robot                     |
| 82   | Smart Purpose cleaning Robot  |
|      | GreenV: Green & Healty Environment through minimizing carbin            |
| 83   | Contaminants by exhaust gases   |
| 84   | Military War Robot  |
| 85   | Smart Helmet  |
|      | Electrophoretic Deposition of Commiphora wightii (mukul) loaded zein/   |
|      | Mesoporous Bioactive Glass Nanoparticle on Titanium for orthopedic      |
| 86   | implants  |
|      | Design of Efficient controller and Fast charger for Electric Motor Bike |
| 87   |   |
|      | Multi level Three PhaseVoltage Source inverter for on Grid PV system    |
| 88   |   |
| 89   | The synchorization of BLDC Machine for electric vehicle                 |
| 90   | IoT Based motor health monitoring system                                |
| 91   | Design Analayis and Model Fabrication of verrical axis wind turbine     |
| 92   | PYROLYSIS of WASTE PLASTICS INTO FUELS                                  |
|      | Production of 5000 litiers/day of biodiesel using jatropha oil via      |
| 93   | transestarification process   |
| 94   | Production of Ethylene Dichloride by Direct Chlorination Method         |
| 95   | Production of green fibreboard from pretreated agro industrial waste.   |
| 96   | Production of Nitro Phosphate by Odda Process                           |
| 90   |   |
| 97   | Manufacturing of Urea By Snamprogetti                                   |
| 31   | Process for 1900 MTPD   |

|     | Manufacturing of Formalin (37%) formaldehyde aqueous solution) by                            |
|-----|--|
|     | Partial Oxidation of Methanol over Silver Catalyst   |
| 98  |  |
| 99  | Smart Home Energy Management System  |
|     | Design & Development of Mini Dense Plasma Focus for Electronic                               |
| 100 | Industry to Study Single Event Upset Phenomenon  |
| 101 | Unmanned Ground Robot  |
|     | IoT based solar powered smart irrigation system without batteries using                      |
| 102 | MPPT.  |
| 103 | Flood Monitoring and Water System  |
| 104 | Intelligent Lithium-Ion Battery Management System  |
|     | Optimization of Power Electronic Circuit Topologies using Machine                            |
| 105 | learning   |
| 106 | Absorption refrigeration chamber using solar energy  |
| 107 | Low Cost efficient portable ventilator   |
| 108 | Production of motor oil from coal  |
| 109 | Monitoring of Irrigation system using SCADA Application                                      |
|     | Production of 100 MTPD of linear alkul sulfonic acid from linear alkyl                       |
| 110 | benzen   |
| 111 | Belt Type oil skimmer for Industrial Waste Water   |
| 112 | Automatic Medication System for Patient Care   |
|     | TRAIN COMFORT ANALYSIS USING ACCELERATION  |
| 113 | MEASUREMENT AND NEURAL NETWORK   |
| 114 | RC based Autonomous Real Electric Vehcile  |
|     | Numerical And Experimental Investigation of Concrete Beam Reinforced                         |
| 115 | with Steel and FRP Bars Under Flexural Action  |
| 440 | Green Retrofitting of an existing builing envelope using BIM-A Case study                    |
| 116 |  |
| 117 | Smart Audio Testing and hearing aid  |
| 118 | Design and Development of stairlift  |
| 119 | Cum Rubber and Waste Engine oil modified bitumen   |
| 400 | Automated Image Dataset Collection System For Cotton Crop Leaves                             |
| 120 | Onli Maintaine Fating diagraphic annuals and a section in a section in the HAV               |
| 121 | Soil Moisture Estimation using remote sensing imagery by UAV                                 |
|     | Design, development and experimental analysis of a waste heat recovery                       |
| 122 | system for the surface   |
| 122 | of a rotary cement kiln  Towards Reducing Handoff Times in Next Generation Wireless Networks |
| 123 | Towards Reducing Handon Times in Next Generation Wheless Networks                            |
| 120 | Traffic-Aware Service Differentiation in Software Defined Networks for                       |
| 124 | Healthcare   |
| 147 | Seismic Behaviour of Skewed Bridges in Pakistan using Non Line Time                          |
| 125 | History Analysis   |
| 126 | Smart Shopping Cart  |
|     | Development of Weft Knitted Structures with Self-Diagnostic Function for                     |
| 127 | protective Application   |
|     | Detection of defects in aircraft hybrid joints through a scanning scheme                     |
| 128 | development  |

| 129 | Design and Eshrication of Flanning Wing Appropria   |
|-----|---|
|     | Desing and Fabrication of Flapping Wing Appratus  |
| 130 | Design and development of a small Sized heavy lift drone  |
| 131 | Ballistic Analysis if Impact of APFSDs round and Heat round on RHA plate                              |
| 132 | Evaluation of Mechanical Properties of Aviation Grade Compostie under<br>Extreme Environments         |
| 133 | Fabrication of Bladeless UAV for experimental testing   |
| 134 | Design and devleopment of air-to-air recharging for RC drone  |
| 135 | Fabrication of an IC engineer for UAV applications  |
| 136 | Development of Rescue Robot with Smart Searching Methodology Desing                                   |
| 137 | Design and Analysis of PIPE Inspection and Climbing Robot   |
| 138 | Experimental Analysis of Airfoils of wind turbine for drag and pressure distribution                  |
| 139 | Water Rescue Robot  |
| 140 | FPGA-Based FM Broadcast Monitoring, Recording & Playback System (SDR)                                 |
| 141 | Smart Hub for Air Conditioning Network  |
| 142 | Multi Sourced Electric Cart   |
| 143 | Automated Escalator system on already built staircase   |
| 144 | Al Powered Self-Checkout System   |
| 145 | Artizen   |
| 146 | Smart Warehouse   |
| 147 | Signified   |
| 148 | Tutornia  |
|     | Influence of chemical treatment on the structural properties and durability                           |
| 149 | of locally available bamboo as a sustainable construction material.                                   |
| 150 | Mycelium-Based Bioplastic: An Alternative to Polystyrene  |
|     | To develop sustainable lightweight ALECA infill smart panels for buildings and development of machine |
| 151 | learning tool to predict mechanical properties of ALECA concrete                                      |
| 152 | Intelligent Gepbing (Smart LMS)   |
|     | To develop a 3D Concrete printer (CNC router Machine based) Capable of                                |
| 153 | moving in 3 D Degrees of Freedom  |
|     | Development of Process simulation model of gas processing plant for                                   |
| 154 | OGDCL   |
| 155 |   |
| 156 | Condition monitoring and diagnostics of critical engineering assets based on machine learning         |
| 157 | Virtual Reality Based Excavator Training Simulator  |
| 158 | SAKOON: Automating the Electric Workload of a Building  |
| 159 | FPGA based real-time video processing system  |
|     | Improvement in the strength of unburnt bricks using fly ash and bagasse                               |
| 160 | ash as cemnetitious material  |
|     | Evauation of Empirical SPTN-Vs correlations using 1D site response                                    |
| 161 | analysis for shalloe bedrock sites in Islamabad, Pakistan   |
| 162 | Prosthetic Hand for Disabled Persons  |

| 163 | Control of a 6 DoF Robotic Manipulator   |
|-----|--|
|     | Design and model fabrication of brown sugar making machine using a   |
| 164 | sugar can juice  |
| 165 | PLC/MCU Based Full flight Simulator cockpit of cessna-172 Aircraft   |
|     | Design, Simulation and Characterization of a Compact Wireless Power  |
| 166 | Transfer Infrastructure for Portable Electronic Peripherals  |
| 167 | Design & Development of solar based MPPT Inverter  |
| 168 | Predictive Mainternance in Industry 4.0  |
| 169 | Design and Fabrication of sugarcane cutting  |
|     | Energy audit to reduce energy consumption and increase sustainability  |
| 170 |  |
| 171 | Non-Intrusive Load Monitoring System   |
| 470 | Solar Powered auto irrigation monitoring system with plant health  |
| 172 | indication using image processing  |
|     | Parametric studies on the flow characteristics in porous media for the development of indicator predicting shelf life of perishable food items |
| 173 | g area and promote grant and a parameter and a                                 |
|     | Dynamics of sessile droplet over hydrophobic surfaces under external   |
|     | electric field   |
| 174 |  |
|     | Determination of Water Saving and Crop Water Productivity using Bottle   |
| 175 | Wick Irrigation System for Bitter and Sponge Gourd Crops   |
| 470 | Evaluation of low cost drip irrigation system at different hydraulic heads for   |
| 176 | maize production   |
| 177 | Agricultural modernization and its influence on agriculture sustainability,  |
| 177 | The Hydroponics System (NFT)  Experimental Investigation on the structure response of Bubble Deck slab   |
| 178 | after localized fire exposure  |
|     | Cost-Efficient and Smart Automated Structural Health Monitoring System   |
| 179 | using Micro-Controller UAV-Driven Drone  |
| 180 | Reverse Vending Machine  |
|     | Smart Brain Computer Interface for Controlling and Monitoring of Medical   |
| 181 | Bed  |
| 182 | Rover Robot  |
| 183 | One Way Smart Street Lighting System   |
|     | Study of GHG emissions of manufactuing sector of Pakistan Integrated   |
| 184 | with SGGs  |
| 185 | Food Saviour   |
| 186 | Design and fabrication of smart mosquito killer machine  |
| 407 | Design and manufacturing of an industrial blender for tea leaves / other   |
| 187 | condiments.  |
| 100 | Design and Implementaion of electric assisted bicycyle by self recharging  |
| 188 | System  Design and Entrication of Automatic Dishwasher   |
| 189 | Design and Fabrication of Automatic Dishwasher   |
| 190 | Renewable Power Generation via Animate Prime Movers  |
| 191 | Development of smart condcutive textile for wearable applications  |
| 192 | Multimode smart wheel chair for quadriplegic patients  |

|     | Exhibition of rice hugh hased biocomposites heards to investigate its          |
|-----|--|
| 193 | Fabrication of rice-husk based biocomposites boards to investigate its         |
| 193 | properties for structural application  |
| 194 | Performance of Molasses waste as a cement replacemnet material for             |
| 194 | concrete   |
|     | TARGETING TO ZERO ROUTINE FLARING (ZRF): RECOVERY AND                          |
| 105 | CONVERSION OF INDUSTRIAL FLARE GAS INTO CLEAN ENERGY                           |
| 195 | (H2)   |
| 106 | Enriched biogas and bio fertilizer production from cow through anerobic        |
| 196 | digestion  |
| 107 | Manufacturing of Super absorbent Polyment (Sodium Polyuacrylate)               |
| 197 | Design On the institute and felorisation of another place bould truly in a sta |
| 400 | Design, Optimization and fabrication of small scale hydel turbines to          |
| 198 | harness from low-head sources  |
| 400 | Physio-Chemical Analysis and Groundwater Prospectiing at Main campus           |
| 199 | of UET, lahore   |
| 000 | Solar Powered Hydroxyl Gas Production, utilization and Optimization in         |
| 200 | Thermal Power System   |
| 004 | 3D Printable, Cost-Effective, Electric Powered Human Prosthetic Hand           |
| 201 | with Parametric Modelling  |
| 000 | Laboratory Study of stabilization of soils contaminated with industrial waste  |
| 202 | using Lignosulphonate  |
| 000 | Structural performance of Earth Retaining System: An efficient and             |
| 203 | Economical solution to locak construction Industry                             |
| 204 | A study of structural health monitoring of bridges                             |
| 005 | Development of cemnet-less recycyled aggregate concrete A sustainable          |
| 205 | solution for future construction   |
| 000 | Design of sprinkler Irrigation Syste for an Area and its cost comparision      |
| 206 | with Canal system  |
|     | Development of modified catalyticitic membrances for accelerated               |
| 007 | elimination of Pharmacuetical products using Advanced oxidation process        |
| 207 |  |
| 000 | Experimental Evaluation of subgrade soil stabilized with rice husk ash for     |
| 208 | use in road construction   |
| 000 | Design of sustainabke water distribution systems fo urban areas in             |
| 209 | developing countries   |
| 210 | Conditional Assessment of Bridges  |
| 044 | Design and Investigation of a four stroke camless Engine using                 |
| 211 | programmitcally controlled actuators   |
| 212 | Analysis of EEG Signal to Classify Sleep Stages using ML                       |
|     | Tracking and monitoring of fitness of athletes using IoT Enabled wearable      |
|     | activity recognition and Random forest algorithm for performance               |
| 213 | prediction   |
| 214 | Design and Development of a Robotic Ultrasound Probe Holder                    |
|     | Development of Intelligent Sleep Monitoring System for Vehicles to             |
| 215 | Prevent Road Accidents   |
|     | Development of a wearable Tremor Supression Glove for Rehablitation of         |
| 216 | Parkinson Disease  |
| 217 | EEG Based Mind Controlled Smart Prosthetics Arm                                |

|               | MA to the second of the second |
|---------------|--|
| 218           | "An integrated syringe and infusion pump system for controlled drug  |
|               | delivery of hospitalized patients  IOT BASED KNEE REHABILITATION DEVICE  |
| 219           |  |
| 220           | Investigation of Durability and Structural   |
| 220           | Performance of Fiber-Reinforced Spun Cast Concrete Pipes   |
| 221           | Mechanical properties of Coal bottom ash concrete prepared by partial  |
| 221           | replacement of cement and sand  Potential Evaluation of Inverted wells using Rain water for Ground water   |
| 222           | Recharge in lahore City  |
| 223           | Smart Assistant for visually impaired people   |
| 220           | Response of Soft Clay to Traffic   |
| 224           | Loading  |
| 225           | Classification of Soil Texture and Organic Matter  |
| 226           | An assessment of potential in low cost housing in Pakistan   |
| 220           | Management of Irrigation Supply and Demand of  |
| 227           | Tarbela Reservoir  |
| _ <del></del> | A Machine Learning based High Risk Disease Prediction & Personalized   |
| 228           | Diet Tracking & Monitoring System  |
| 229           | Remote Patient Monitoring Application using IOT  |
|               | Reconfigurale Metasurface for polarization convenetion and RCS reduction   |
| 230           |  |
|               | Feasibility study and process optimization of citric acid production plant in  |
| 231           | KPK, using sugar cane molasses   |
|               | Development and Characterization of Ceramic waste powder-bentonite   |
|               | blended GGBS based cement-less geopolymer concrete desinged using  |
| 232           | Tasguchi method  |
|               | Design of Intensive Firing roasting and melting furnance by non ferrous  |
| 233           | metal  |
| 234           | CP robot by AI   |
| 235           | Engine Emission Analyzer   |
| 000           | Production of Methanol through Catalytic Hydrogenation of Co2 Captured   |
| 236           | from Air   |
| 237           | Production of 850 X 10 power three TPA of Bio-Ehtylenet from Zea-Mays (Corn Stover)  |
| 231           | ,  |
| 238           | Production of Hydrogen from Steam biomass Gasification (for Fuel Cells)  |
| 239           | Production of propylene Glycol from glycerol   |
| 240           | Production of 13,500 ton/ day biodieseil from chicken fat  |
| 241           | Production of bio-Diesel by using alagae   |
| <u> </u>      | Production of Synthetic Natural Gas (SNG) through gasification of biomass  |
| 242           | (food Waste)   |
| - '-          | Design, Fabrication and Control of a solar Thermal Room Heating System   |
| 243           | boolgn, rabilication and control of a solar memba room neating system  |
| 244           | Desing and Development of a Smart Tough Terrain Beetle Robot   |
| · ·           | Desing and Development and control of a smart, Reconfigurable, Stair   |
| 245           | Climbing wheelchair  |
| 246           | Water Sensititve urban design for wah cant city  |
| -             |  |

|     | A study on the self healing and self sensing capabilities of graphene oxide |
|-----|---|
| 247 | (GO) nanoinforced bacterial cemet and concrete                              |
| 248 | Production of 12 MCMD of Biomethane using sugarcane Bahasse                 |
|     | Solar Powered Double H-Bridge LLC Resonant Converter Based Electrical       |
|     | Vehicle Battery Charger with Wide Charging Range and Low Output             |
| 249 | Voltage Ripples   |
|     | Optimization Of Input Parameters For Top Link Used In Millat Tractor For    |
|     | Thread Per Inch And Diametric Measurements At Various Points.               |
| 250 |   |
|     | Integrating the principles of lean manufacturing and ergonomics in textile  |
| 251 | sector  |