

Working Task List

June- July- August
2021



Mechanical Department tasks:

- kinematic for seven degrees of freedom robot Arm analysis and implementation
- PLA and ABS plastic hardness examination for humanoid robot body
- four wheelbase stabilization analysis design and implementation
- Polishing and rough finishing for robotic raged body
- Floyd dynamic force analysis for a small amount of liquid in coffee robot
- Pantry gearbox for handshake robot arm using 3d printed gear and metal gear
- cover box design for robotic dock station
- Automatic mechanical slider for food robot
- mechanical casting template for the robotic lower-level body

Electronics and Power Department tasks:

- Motor drive design and implementation for robot arm
- Motor drive design and implementation for two-wheel robot base
- Power circuit design and implementation for mobile robot and fixed robot
- Reverse engineering for power circuit in the semiauto robot wheel
- Brushless motor control system implementation
- Control circuit design using ARM controller
- Power tolerance examination and improvement process
- Thevenin's Theorem application for distributed control system in robotics

IOT and software development Department tasks:

- User interface analysis, design and implementation for robot control system using JQUERY and web development technique
- User experience testing and improvement for robot control system
- implement a robotic control system via IEEE 802.15.1 connection using embedded Flutter
- Database analysis and design for robotic control system on cloud-based computing
- Synchronization embedded chatbot technique using IBM Watson
- text to speech design and testing for robotic communication system

- Arabic natural language recognition design and testing for robotic communication system
- design and implement a connection layer base for machine learning model via cloud database

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Robotics and AI Department tasks:

- Robot operating system installation and configuration
- Indoor navigation system for mobile robot design and implementation
- Robotic radar using laser-based sensor and laser network
- Dock station recognition system using ROS and LIDAR
- Speech machine learning model for Arabic conversation robotic system
- Robot motion system for seven degrees of freedom
- Embedded TensorFlow integration for robotic vision system

Industrial and system engineering Department tasks:

- Writing the patent text for seven degrees of freedom robot arm
- Writing an industrial form script for multi-purpose humanoid robot
- Conducting final trials and tests of robot automation
- Directing and preparing a work team to carry out the mixed-disciplinary tasks
- Determine faults and faults and anticipate future errors based on multi testing

PM: Eng. Asim

