Ministry of Higher Education and Scientific Research

University of Mosul

College of Engineering

Department of Mechatronics Engineering

Implementation of Autonomous Farming Robots for Sustainable Agriculture Applications.

A REPORT SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR A DEGREE OF BACHELOR OF ENGINEERING (BSc. ENG.) IN THE DEPARTMENT OF MECHATRONICS

Prepared by

Toqa Jamall **Jannat Yasir**

Athbaa walid

Supervised By

Dr. Omar Saadallah

MOSUL-IRAQ

SPRING-2024

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University Of Mosul

College Of Engineering

Mechatronics Engineering Department

Bachelor's Final Project

Implementation of Sorting Product System in an Industrial Line Application

A Graduation Project is Submitted to the Mechatronics Engineering Department in Partial Fulfillment of the Requirements for the Degree of Bachelor of Science in Mechatronics Engineering

Subjected by:

Yacob Khaled ***Moath Abd-Alwahab*** ***Othman Muhamad***

Supervised by:

Dr.Muhamad Azhar Abdillatef AlObaidy

2023 - 2024

Ministry of Higher Education and Scientific Research
University of Mosul
College of Engineering
Department of Mechatronics Engineering

DESIGN AND IMPLEMENTATION OF A SELF-BALANCING ROBOT

Prepared by:

Adnan Kanaan Faidhalla

Syfe Alden Mohammed

Nafisa Nassar Mohammed

Supervised By

Dr. Firas Ahmed Aldurze

MOSUL-IRAQ
SPRING-2024

University of Mosul

College of Engineering

Mechatronics Department

Bachelor Final Project

An Implementation of Problems Diagnosis in Air-Conditioning System

A graduation project is submitted to the Mechatronics Engineering Department in partial fulfillment of the requirement for the degree of Bachelor of science in Mechatronics Engineering

Submitted By:

Muhammad Bashar Aldulsttar

Aya Faris

Muhammad Manaf saadi

Haneen Essam

Supervised By:

Dr. Muhamad Azhar Abdilatef Al-Obaidy

2023-2024

University of Mosul

College of Engineering

Mechatronics Engineering Department

A PRORT SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR A DEGREE OF BACHELOR OF ENGINEERING (BSc. ENG.) IN THE DEPARTMENT OF MECHATRONICS

Manufacturing of a Balancing Device

Submitted By:

Rayan Nawfal

Abdulah Mohamed

Supervised by:

Dr. Ahmed Wadallah

Dr. Ali Abdel Jalil

2023-2024

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Ministry of Higher Education and
Scientific Research University of Mosul
College of Engineering
Department of Mechatronics Engineering

Manufacturing and operating of educational two DOF (degree of freedom) haptic device

Prepared by

Osama Rashid Suleiman **Murooj Qusai Ganim**

Samy Jassem Mohammed

Supervised By

Dr. Omar Maaroof

MOSUL-IRAQ

FALL 2024

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Ministry of Higher Education and Scientific Research

University of Mosul

College of Engineering

Mechatronics Engineering Department

A Smart Solar-Based Irrigation System with Sun Tracking and Environmental Sensing

A graduation project is submitted to the Mechatronics Engineering Department in partial fulfillment of the requirements for the degree of Bachelor of Science in Mechatronics Engineering

BY

Mortada Hilal Khayoun

Mustafa Saad Abd

Meaad Ramadan Suleiman

SUPERVISOR

Dr. Mohammad Falah

2023-2024

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Ministry of Higher Education and Scientific Research

University of Mosul

College of Engineering

Department of Mechatronics Engineering

DESIGN AND IMPLEMENTATION A PROTOTYPE DEVICE FOR WIRE FORMATION

Prepared by

OSAMA RABEE **OSAMA MAJID**

HUSSEIN ANSAR

Supervised By

Dr. Myasar Salim

MOSUL-IRAQ

FALL 2024

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University of Mosul
College of Engineering
Mechatronics Engineering Department

Bachelor's Final Project

Manufacturing of Rotary Conveyor for lap volt Robot arm

A graduation Project Submitted to The Mechatronics Engineering Department inPartial Fulfillment of the requirements for The degree of Bachelor of science in MechatronIcs Engineering

Students:

Amany Khaled

Abdullah Samir

Omar Abdulrahman

Supervisor by:

Dr. Saad Zaghlul

University of Mosul
College of Engineering
Mechatronics Engineering Department

Under Graduate Research Project (II)

Manufacturing of an heater for heating a room

A graduation project is submitted to the Mechatronics Engineering Department in partial fulfillment of the requirements for the degree of Bachelor of Science in Mechatronics Engineering

4th Stage

Supervised by:

Dr. Loay Bashir Younis

Prepared by:

Omar Raed Mahdi

Yassin Mohammed Hussein

Mohammed Bashir Ahmed

(2023-2024)

Bachelor's Final Project

Design and Implementation of a wireless communication and control system for multiple robots using sensors

A graduation project is submitted to the Mechatronics Engineering Department in partial fulfillment of the requirements for the degree of Bachelor of Science in Mechatronics Engineering.

Under the supervision of:

Dr. Zahraa Tarik Mohammad

Student preparation:

1. Yousef Khaled Hardan
2. Mohammad Basil
3. Madian salal

2024-2023

Scanned with CamScanner

Ministry of Higher Education and Scientific Research

University of Mosul

College of Engineering

Department of Mechatronics Engineering

"Implementation Of a Line-Following Robot as a Mail Delivery Robot."

Prepared by

Ethar Hameed **Deema Ahmed**

Duaa Mohammed

Supervised By:

Dr. Zeyad Mohammed Yosif

MOSUL-IRAQ

Spring 2024

Ministry of Higher Education and Scientific Research

University of Mosul

College of Engineering

Mechatronics Engineering Department

MANUFACTURE OF AN AUTOMATIC EGGS INCUBATOR

A REPORT SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR A DEGREE OF BACHELOR OF ENGINEERING (BSc. ENG.) IN THE DEPARTMENT OF MECHATRONICS

Prepared by:

Zubaida Tariq Qasim **Mariam Mohammed**

Sally Aziz

Supervisor By

Dr. SAYF A. MAJEED

Mosul, Iraq

Fall 2024

Scanned with CamScanner

Ministry of Higher Education and Scientific Research

University of Mosul

College of Engineering

Department of Mechatronics Engineering

Automated sorting system using a robot arm

Prepared by

ADAM SILEEM **ABBAS AMER**

DALYA ZAKI KHALIL

Supervised By

Dr. Marwah Ezzulddin Merza

MOSUL-IRAQ

FALL 2024

Scanned with CamScanner

Ministry of Higher Education and Scientific Research

University of Mosul

College of Engineering

Department of Mechatronics Engineering

"Enhanced Classification Accuracy in Breast Cancer Diagnosis Using Refined Fuzzy Min-Max Neural Networks with Preprocessing Techniques- Implementation and Performance Evaluation"

Prepared by

Almutasim Abd Jassim **Zubaida Alaa yahya**

Supervised By:

Dr.Mohammed Falah Mohammed

MOSUL-IRAQ

Spring 2024

Ministry of Higher Education and Scientific Research

University of Mosul

College of Engineering

Department of Mechatronics Engineering

Design And Implementation of Real-Time AI Object Detection for Mobile Robot Applications

Prepared by

Aya Mahmoud Shaker **Khalel Saeed Khalel**

Srour Saad Fawzi

Supervised By

Dr. Mohammed Yaseen Hazim

University of Mosul / Iraq
May / 2024