شبكة المعلومات الجامعية

التوثيق الإلكتروني والميكروفيلم

بسم الله الرحمن الرحيم

HANAA ALY

شبكة المعلومات الجامعية

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التوثيق الإلكتروني والميكروفيلم

جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها
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HANAA ALY

APPLICATIONS OF UNMANNED AERIAL VEHICLE IN SMART CITY PLANNING

By

Haiam Elkadahy Shahin Elmetwaly

A Thesis Submitted to the
Faculty of Engineering at Cairo University
in Partial Fulfillment of the
Requirements for the Degree of
MASTER OF SCIENCE
in
Electronics and Communications Engineering

FACULTY OF ENGINEERING, CAIRO UNIVERSITY
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Approved by the
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Title of Thesis:

Applications of Unmanned Aerial Vehicle in Smart City Planning.

Key Words:

Unmanned Aerial Vehicles; Genetic Algorithms; Trip Planning; Observability, Non-Dominated Sorting Genetic Algorithms.

Summary:

In this thesis, we have presented smart cities and their significance. Moreover, we have addressed the utilization of UAVS to carry out few tasks inside smart cities. The primary task was to gather data from smart meters with the objective of diminishing the total annual cost of collecting data from smart meters. The second task was to observe the distribution system, and the objective of this task was to get the most noteworthy degree of observability with minimum total cost per year. MATLAB has been used to solve the presented problems and the results showed a significant performance, where more than one case was studied, the results were compared using more than one algorithm.

Disclaimer

I hereby declare that this thesis is my own original work and that no part of it has been submitted for a degree qualification at any other university or institute.

I further declare that I have appropriately acknowledged all sources used and have cited them in the references section.

Name: Haiam Elkadahy Shahin Elmetwaly Date: ...../ ..... / 2021

Signature:

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