Proposal for graduation project (2022 -2023)

Project Title: Digital On-Street Parking Meters

Supervisor(s)

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Abstract:

On-street parking has been a burden on the residents of Egyptian streets due to the unregulated and self-appointed parking workers. However, with well-regulated and digital parking meter systems, it can be a source of income for the city council or private entities as well as a method of controlling traffic in some streets. Indeed, a well-regulated parking system is a symbol of the industrialization of a city. There are problems with this classical parking meter system such as difficulty to keep up and lack of modernization. This project proposes a digital parking meter design that can allocate space, and time and prevents the socio-economic drawback of the current unsupervised system. This project explores the feasibility of designing a hi-tech parking meter system that will take advantage of the technologies available and will improve and resolve the existing problems.

Project details.

The system should consist primarily of the system to detect a car, an interface circuit, an interface platform, and a housing for the meter. The project would propose a more user-friendly and efficient on-street parking meter system by applying new technologies. Some of the main goals to achieve is also to provide better enforcement performance, to provide better control in short-term parking and create more opportunities for short-term parkers, to reduce the need for human labour in the parking system, to help drivers find spaces easier, and provide different methods of paying the fares.

By integrating this solution into a microprocessor-based embedded system. The functionality of car detection, human (car driver) and machine (parking meter) interface, and possibly the interface and supervision of multiple meters, are all monitored through an embedded system.