



Bachelor End Project Report  
Computer Engineering-Software

Location-based Cross-platform Search  
Engine Application for Local Businesses  
and Consumers

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## Summary

The use of mobile systems, especially smartphones, has been on the rise consistently. The portability, ease of use, and accessibility are fundamental factors contributing to the widespread adoption of these devices. However, over the past two decades, with the evolution and advancement of this technology, mobile phones have been equipped with features far beyond their initial and primary functions, becoming what is commonly referred to as "smartphones." These smartphones are not only capable of performing their traditional tasks, such as making calls and sending text messages but also function like full-fledged computer systems. Over time, hardware technology advancements in the mobile domain have significantly increased the capabilities of these smartphones, practically turning them into powerful computers. Features such as high-speed internet connectivity, running applications like various CAD programs, high-quality video and photography, playing high-end games, quick and easy access to social networks, and many other capabilities have led to a remarkable increase in the number of smartphone users. Advanced hardware capabilities have transformed these smartphones into powerful computers. However, the factor that enhances the efficiency of this hardware is nothing but the operating system.

Mobile operating systems provide a graphical interface to users to make the most of the available hardware capabilities. Among these mobile operating systems are Android, Windows, and iOS. Companies like Google, Microsoft, and Apple consistently engage in fierce competition, capturing the attention of all mobile and technology enthusiasts with their advanced achievements. Among them, the Android operating system by Google is the most widely used mobile operating system.

An application that can run on this operating system, providing specific features to address the needs or issues of a particular spectrum of users, including users of smartphones and tablets, is always well-received. Software developers and employers increasingly aspire to develop such applications to not only rapidly expand their product range but also stay ahead with cutting-edge technology and facilitate their services for people and users of this operating system more than ever before. In general, providing an application that simplifies and expedites people's daily activities and saves time is highly popular because time is a factor that is always crucial for everyone.

The design and implementation of a restaurant search system based on geographical location, food type, and cost are the goals of this project. With this perspective in mind, an effort has been made to provide everyone with a fast, easy-to-use, up-to-date, and reliable method through the design of this system.