



**Benha University  
Faculty of Arts  
Department of  
Geography and  
GIS**



# **Using Cross-variable maps and Cartographic Modeling in the Demographic Analysis of Qalyubiyya Governorate**

A thesis submitted in partial fulfillment of the requirements for the  
Master degree

Department of Geography and GIS- Branch of Cartography  
(Credit hours system)

**By**

**Mohamed Attia Abdel Azim Ali Afifi**

**Supervised by**

**Prof. Ali Mustafa Kamel  
Professor of Physical Geography  
and Cartography**

**Prof. Sameh Ibrahim Abd El Wahab  
Professor of Human Geography  
and Cartography**

**2021**