

Computer Engineering Program

# Big Data Visualization

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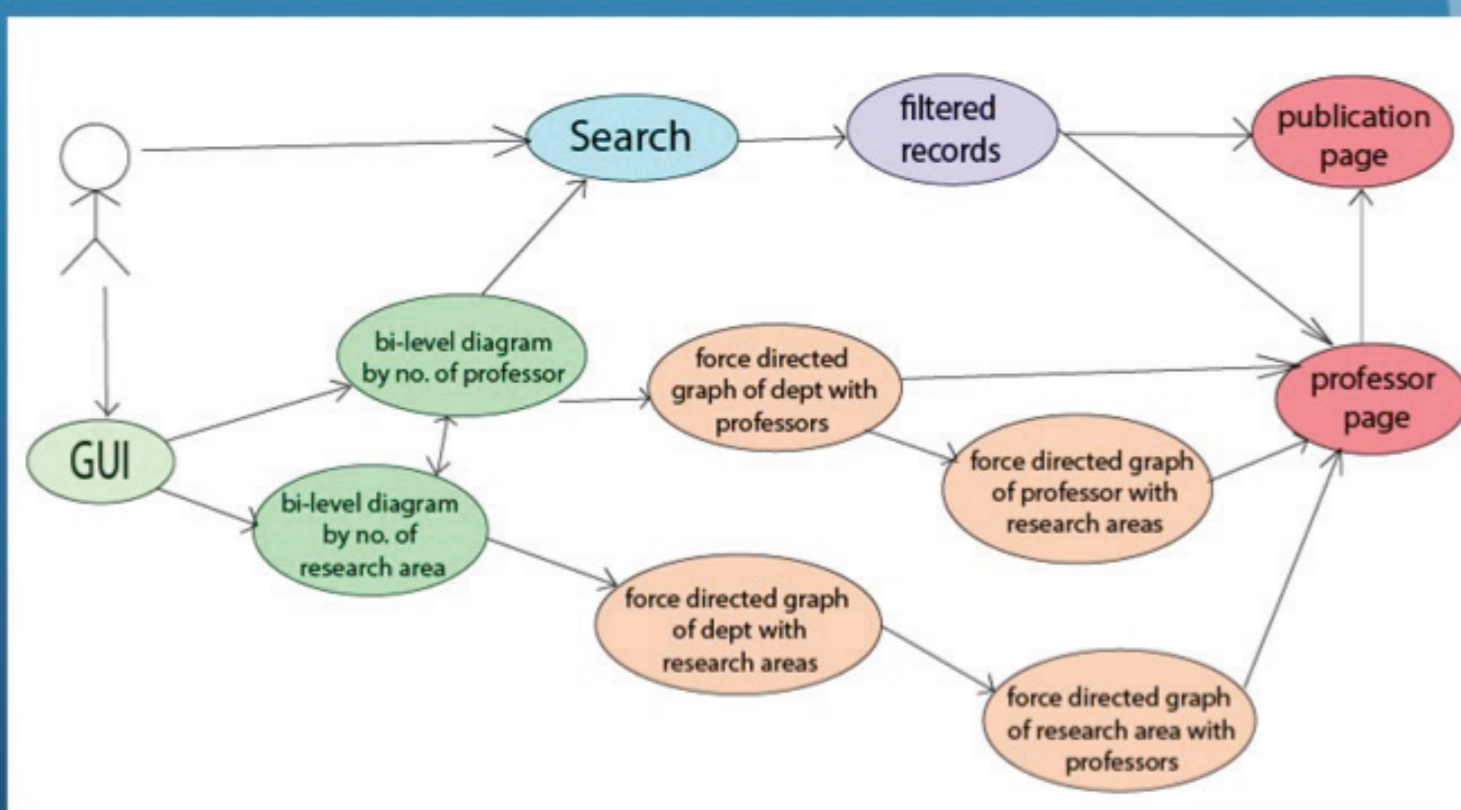
Advised by Dr. QU Huamin



## Introduction

This project aims at increasing the academic visibility of HKUST professors' publications and research projects in order to raise their reputation, the university's reputation and the university's rankings. We develop a new website with database connection and GUI visualization. As more people access, there is a higher chance for others to view and cite HKUST's paper. Also, people can easily obtain a better idea of what each professor is working in.

## Overview



## System Architecture

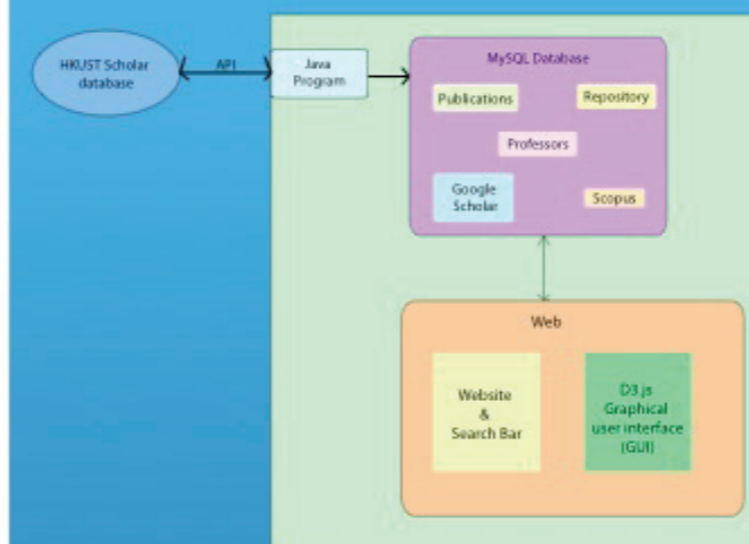


Figure2. Connections between systems

- Java Program was used to extract data from the HKUST library database with the API URL.
- Local database was implemented with phpMyAdmin and stores all the professors and publication records and connected to the website and the GUI.
- Web is the main part of visualizing the publication and professor data. It displays the professor's detail and their corresponding graph and all their publication.

- The main table is the 'professors' table and the primary key is 'itscuser'. All table also has that 'itscuser' field and this is the key to connecting all the table and getting the corresponding data records in each table.

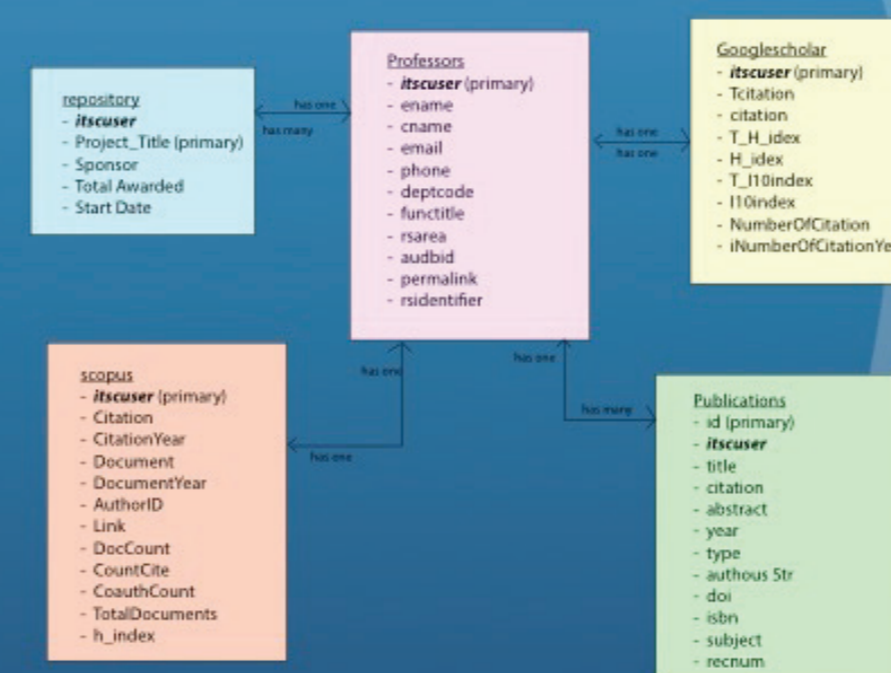


Figure3. Database Design

## User Interface



Figure 4. Bi-level diagram by no. of professor

In the professor's graph, when mouse over the node, it will show the profile of the professor. When users click the provided link, a new tag will be opened and directed to the professor's page.



Figure5. Force-directed graph of dept. with professors



Figure6. Professor's Portfolio

The professor's page contains all their profile detail, their publications and the number of citation in Scopus and Google Scholar

## Conclusion

In this project we have developed a system that display the relationship among these professors. Also, provided a platform to search the publications and professor's webpage. We hope that this visualized system can be deployed in the HKUST Scholarly Publications.