COMP3000HK Computing Project

Project Topic Submission Form

Student Information

1. Student Name *

   TSE CHI KIN

2. HKUSPACE Student ID *

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Project Preferences

Academics who specify topics know that these will be sufficiently original and challenging to meet the needs of a Bachelor's degree. When you specify your topics you will need ensure that it is original before proposing it and be able to convince one of the supervisors to take it on, which is a substantial challenge for you.

You are required to submit the followings: the project title, description on your topic, keywords and the expected deliverables in the area below.

Please fill in the following table according to your preferences.

Project Preference 1

5. Project Title *

ACS Mini System - Automation of Construction Data Monitoring with Secure and Safety System

6. Description *

In the modernization of construction work, automation and robotics are increasingly utilized. However, many SME companies, particularly in Hong Kong construction industry with aging workers and outsource pattern, still rely on manual monitoring due to limited resources. The workers use field book to mark down construction data, go back to office, input data to computer and calculate the result with excel, print out report and submit to client. This manual approach increases the risk of errors and accidents. To address this issue, the project aims to develop a mini and secure automation monitoring system with incorporating small-scale AI technologies. The focus is on

7. Keywords *

A – Automation, Artificial intelligence, Architecture
C – Cyber Security, Construction
S – Safety & Education

8. Expected deliverables *

Backend: a mini scale of database system with higher security.
Frontend: PC base frontend and mobile apps for input/output.

9. Your relevant skills / knowledge / experience *

Programming in C#, Android, Python, AI Technology.
Knowledge in Cyber Security.

10. References (Any reference / relevant resources?) *

https://www.sciencedirect.com/science/article/abs/pii/S0926580521005501
https://www.sciencedirect.com/science/article/pii/S0926580521004398
https://ascelibrary.org/doi/10.1061/%28ASCE%29CO.1943-7862.0002193
https://www.frontiersin.org/articles/10.3389/fbuil.2021.612668/full
https://www.jacksonlewis.com/insights/construction-industry-data-security-

Project Preference 2

11. Project Title

Enter your answer

12. Description

Enter your answer

13. Keywords 🔊

Enter your answer

14. Expected deliverables 🔊

Enter your answer

15. Your relevant skills / knowledge / experience 🔊

Enter your answer

16. References (Any reference / relevant resources?) 🔊

Enter your answer

Project Preference 3 🔊

17. Project Title 🔊

Enter your answer

18. Description 📖

Enter your answer

19. Keywords 📖

Enter your answer

20. Expected deliverables 📖

Enter your answer

21. Your relevant skills / knowledge / experience 📖

Enter your answer

22. References (Any reference / relevant resources?) 📖

Enter your answer