Comp 915-2023

Assignment 10

Assigned 31 April 2023

Due 14 April 2023 (note the 7th is a holiday)

Topic: Project-based Learning

Design a "3D project" for advanced undergraduate or graduate students of Computer Science. This project should involve at least three different Computer Science topics – like operating systems, computer architecture, compilers, programming languages, computer networks, databases, algorithms & data structures, or machine learning.

1. Describe the project in about ½ a page.

2. Show how concepts from each of your three topics need to combined together in order to realize the project.

3. Describe the new concepts students would learn through such a project that could not be learnt when each of the three topics are studied in isolation.

4. Describe how design decisions on issues related to each of the three topics may influence the design decisions made on issues related to the other topics.

As an example, such a project could be on how compilers and processor architectures may be co-designed for energy-efficient execution of programs. All the above descriptions should result in a single-spaced $\approx$ 2-page long report.