

# Software Engineering

**CSE435**

**Fall 2024**

Homework 3

Due: September 18, 2024

This assignment focuses on software challenges of today and the future.

**Read the article by Fred Brooks (“No Silver Bullet”) and consider the cases that were discussed in HW1, HW2, and lectures to address the following points in a 1-page essay.**

**Summary of Brooks article:**

- Concisely define what Brooks meant by a “silver bullet” in your own words.
- Describe 3 examples of currently-used technology that are considered “silver bullets,” using the definition by Brooks. Provide an analysis as to why each of the respective examples should be considered a “silver bullet”. What problems are they respectively attempting to address?
- Summarize and contrast his meanings for the essence and the accidental difficulties of (software) technology; use examples from above to support your discussion.

**Describe challenges posed by future autonomous, safety-critical systems**

- Describe essential difficulties posed by these systems; explain and include concrete examples from the transportation and/or the medical sectors.
- Describe and discuss the potential accidental difficulties posed by these systems; how can these accidental difficulties be mitigated?