KENNESAW STATE UNIVERSITY

SYLLABUS
COLLEGE OF COMPUTING AND SOFTWARE ENGINEERING
DEPARTMENT OF COMPUTER SCIENCE

CS 8998/SEC 2: ADVANCED RESEARCH IN COMPUTER SCIENCE
ACADEMIC TERM: FALL 2024

Student Information

Student Name: Md Romyull Islam, Long Vu, Nobel Dhar
KSU Email: ndhar@students.kennesaw.edu, lvu6@students.kennesaw.edu, mislam22@students.kennesaw.edu
Signature: Md Romyull Islam, Long Vu, Nobel Dhar

Course Information

Class meeting time: FRIDAY 12:00 PM - 3:00 PM, Aug 12 – Dec 3, 2024
Location: J210

Instructor Information

Name: Kun Suo
KSU ID:
Email: ksuo@kennesaw.edu
Office Location: J-318
Office phone: (470) 578-2524
Office Hours: Friday 4-5PM, Aug 12 – Dec 3, 2024
Preferred method of communication: D2L/Email (ksuo@kennesaw.edu)

Course Description

This course covers special topics on studies the relationships between system resource utilization and energy efficiency in various edge and IoT systems in order to better understand how to optimize the key performance parameters of edge computing systems. This course focuses on the following exploration and discussion: (1) analyzing the power inefficiency in different edge systems and data-driven energy-aware framework for runtime edge and IoT applications, (2) tailoring the edge runtime framework including parts of data and control planes to reveal hidden dependencies, and (3) scaling and evaluating this framework and methodology in high-fidelity realistic test scenarios.

This course aims to provide students as follows: identifying and formulating research problems, reading research papers, literature searching, self-guided learning, designing research studies, and communicating research both orally and in written form.

Prerequisites: Approval of the instructor, program director, and department chair

Credit Hours: 3 Credit Hours

Course Materials

Required Texts: There are no required books for this class. You will be required to read papers available on the web or provided by the instructor.

Technology requirements: The course coverage will be based on Python and Latex.

Learning Outcomes

Upon the completion of the course, students should be able to

1. Understand how to read academic papers in Computer Science
2. Prepare and deliver a presentation demonstrating understanding of a paper or new tool or piece of technology
3. Analyze results and shortcomings of published work
4. Develop a research project and paper

Evaluation and Grading Policies

The required work:

1. 25% Response paper
2. 25% Discussion sessions: Attendance and preparedness
3. 50% Final paper

Your final grade will be a weighted combination of the above parts and assigned on the following scale: A = 85 - 100%; B = 70 - 84%; C = 55 - 69%; D = 40 - 54%; F = 00 - 39%.

The final grade will be assessed based on students' progress and findings as follows:

Course Schedule

The student should report his/her progress weekly to the instructor.

Weeks	**Due**
1-2	Related Work
3-4	Introduction
5-6	Method
7-8	Experiments
9-10	Conclusion
11-12	Abstract
13-14	Revised draft paper
15-16	Final

Course Policies

Attendance: Class attendance is required and very important for the successful completion of the course. Students are expected to attend every class and participate in the discussion of ideas developed by others in the class. Peer feedback is essential and is part of the grade assigned to each of the course assignments stated above. Excused absences must be planned for, when possible, and justified with documentation. The student is responsible for making up missed class sessions. Late arrival and early departure that causes disruption, excessive conversation among students (a disruption in its own right), inappropriate use of electronic devices that cause disruptions, and other actions that disrupt the classroom are unacceptable.

Class Participation: Thoughtful, prepared class participation is essential. This course is designed to give students opportunities to engage classmates and professors in conversations about topics related to computer science. Students should take advantage of this opportunity to build their research community by engaging fully in class discussions with fellow students and faculty.

Classroom Behavior: All students are reminded to conduct themselves in accordance with the Student Code of Conduct, as published in the University Catalog. Every KSU student is responsible for upholding the provision. Students who are in violation of KSU policy will be asked to leave the classroom and may be subject to disciplinary action by the University.

Department or College Policies

Students are expected to be aware that the Computer Science department has certain policies in place that govern practices within the department including:

1. “B” or better grade is required for CS 1321/L and CSE 1322/L and their equivalent transfers. All courses used toward any undergraduate degree in the computer science must be completed with an assessed performance grade of "C" or better. This means that all prerequisite courses from the CS Department must have been completed with a "C" or better in order for a student to enter the next course in a sequence.

2. All requests for course overloads must be made through the College advising office and with the approval of the Program coordinator and department chair. The instructor of any course is not permitted to authorize course overloads.

3. All requests for prerequisite bypasses must be made through the College advising office and with the approval of the Program coordinator and department chair. The instructor of any course is not permitted to authorize course overwrites.

4. All students are encouraged to register their current choice of major using the department major change process. Students who are not recorded under their intended major may find that they may be limited from registering for courses they require to complete their intended program of study.

Institutional Policies

Please visit each of the following links for Institutional policies.

Federal, BOR, & KSU Course Syllabus Policies:

https://curriculum.kennesaw.edu/resources/federal_bor_ksu_student_policies.php

Student Resources:
https://curriculum.kennesaw.edu/resources/ksu_student_resources_for_course_syllabus.php

Academic Integrity Statement:
https://scai.kennesaw.edu/codes.php

KSU Student Resources

This link contains information on help and resources available to students:
https://curriculum.kennesaw.edu/resources/ksu_student_resources_for_course_syllabus.php

Additional Resources

For CCSE Student resources: http://ccse.kennesaw.edu/student-resources.php
KSU Service Desk: The KSU Service Desk is your portal to getting assistance or access to University IT Services. Students call: 470-578-3555 or email studenthelpdesk@kennesaw.edu
Information and links to Resources for Graduate Students: http://graduate.kennesaw.edu/students/
Links to frequently used and helpful services: http://www.kennesaw.edu/myksu/