

Agentic Software Engineering (CS 4/510)

Ref. No: 43793 and 43794

Winter 2026

Course Objective

- This course will focus on application of AI agents to software engineering, for instance, in requirement engineering, code generation, testing, debugging, etc. The course will cover topics ranging from basics of agents based on large language models to their integration in every facet of software engineering processes. This study will be carried out by reading the most recent papers from relevant conferences and journals.

Class Homepage

- <http://www.cs.pdx.edu/~xie/ase-w26/cllms-w26.htm>

Instructor

- Prof. [Fei Xie](#)
Office: FAB 120-10
Homepage: <http://www.cs.pdx.edu/~xie>
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Office Hours

- By appointment

Prerequisites:

- None

Meeting Time and Location

- Friday 9AM-12:40PM, TBD

Textbooks

- There is no textbook for this class and papers will be provided for each class meeting.

Grading

- Paper Presentation and Class Participation: 50%
 - Each student is assigned to a team responsible for presenting two papers on a specific topic in a given week and must participate in preparing and delivering the presentations.
 - Every student is required to attend each meeting and participate in paper discussions.
- Paper reviews: 50%
 - Every student is required to submit 2-page review for every paper being discussed each week, except the papers they are presenting. A review is required to include:
 - Summary of the paper
 - Strength and Weakness of the paper/approach
 - Open problems from the paper

Class Schedules

	Dates	Topics	Notes
Week 1	Jan. 9	LLM Agent Frameworks	Group 1
Week 2	Jan. 16	Multi-Agent Systems	Group 2
Week 3	Jan. 23	Human-Agent Collaboration	Group 3
Week 4	Jan. 30	Requirement Engineering	Group 4
Week 5	Feb. 6	Code Generation	Group 5
Week 6	Feb. 13	Static Code Checking	Group 6
Week 7	Feb. 20	Testing	Group 7
Week 8	Feb. 27	Debugging	Group 8
Week 9	Mar. 6	End-to-End Software Development	Group 9
Week 10	Mar. 13	Evaluations	Group 10

(This schedule is subject to changes according to the need of the class. For the readings of each class meeting, please see the reading list.)

Academic Integrity

- Academic misconducts will be handled according to the rules of the Department of Computer Science, Maseeh College of Engineering and Computer Science, and Portland State University.