CS8903: Special Problems in Software Analysis

Syllabus, Fall 2026

Change Log

Instructional Staff

Instructors: Chris Poch
Teaching Assistants: From current CS 6340 class, as needed

1. Course Description

This independent study is intended as a follow-on to CS 6340. Students will conduct an in-depth, independent investigation into advanced topics within the field of software analysis, building on principles such as dataflow analysis, constraint-based analysis, and automated test generation.

2. Course Objectives

Upon successful completion of this course, you will be able to:

- Take an agreed upon area of exploration and produce an appropriate amount of research for the number of credits enrolled
- Produce a final output, such as a paper, presentation, or program, that demonstrates your mastery of your area of research

3. Required Course Materials

There is no required textbook. Students are expected to source relevant academic papers and documentation appropriate to their chosen research topic.

4. Grading Policy

Your final grade is weighted according to the following distribution:

- **Proposal and Literature Review:** 25%
- **Weekly Check-ins:** 15%
- **Final Deliverable:** 60%

Note: Literature review is optional for students who do not plan to write a paper, but is still strongly recommended to better understand existing work in your chosen area.

All deadlines, except for your final deliverable are flexible. They are intended to keep you on pace, but are not enforced. All deadlines become firm at the start of the last week of the semester. The firm due date for your final deliverable may be closer to the grade submission deadline, in coordination with the class instructor.

Georgia Tech does not assign plus or minus grades. The following scale is used to determine final letter grades:

A: ≥ 90%
B: ≥ 80%
C: ≥ 70%
D: ≥ 60%
F < 60%

If you choose to work as a team on your project, please make sure that the instructor knows who is part of your team so that they can set you up as a team in the Canvas gradebook. All submissions for teams can be made by any team member on behalf of the team.

5. Attendance Policy

Deadlines are on Mondays at 8:00 a.m. ET. While these deadlines are flexible and not strictly enforced, students are expected to perform a weekly check-in via submitting that week's weekly checkin assignment on Canvas.

6. Academic Honesty and Integrity

All Georgia Tech students must read and uphold the Georgia Tech Academic Honor Code. Georgia Tech expects honest and ethical behavior at all times. Any work submitted must be your own; plagiarism or scholarly misconduct will be reported to the Office of Student Integrity

(OSI). In particular, if you are quoting, using, or referencing work by someone else or with its source as an AI, please cite your source.

7. Disability Services

Georgia Tech is an ADA-compliant educational institution. If you have a disability that requires accommodations, contact Disability Services. To receive accommodations, ask Disability Services to forward the instructor a letter specifying the accommodations you should receive. Do this as soon as possible, as it can take up to 15 business days for the office to process your initial application. Even if you are not sure if you need accommodations, you should arrange for any potential accommodations at the start of the course as we are unable to retroactively give accommodations. Disabilities covered by the ADA include ADHD, dyslexia, and pregnancy.

8. Expected Student Conduct

As members of the Georgia Tech community, we are committed to maintaining an environment of mutual respect, professionalism, and academic excellence. By enrolling in this course, you agree to the following expectations:

- **Professional Communication**: We expect all interactions on the designated Slack channel to be professional, respectful, and constructive
- **Proactive Engagement**: Students are responsible for staying informed by checking communication channels daily for important announcements
- **Integrity and Responsibility**: Students are expected to uphold the Georgia Tech Academic Honor Code
- **Collaboration Boundaries**: While we encourage cooperative learning, students must respect the boundary between constructive discussion and academic dishonesty
- **Instructor Support**: The instructional staff is committed to providing support through official channels