Decentralized Systems Engineering cs438

2022/2023

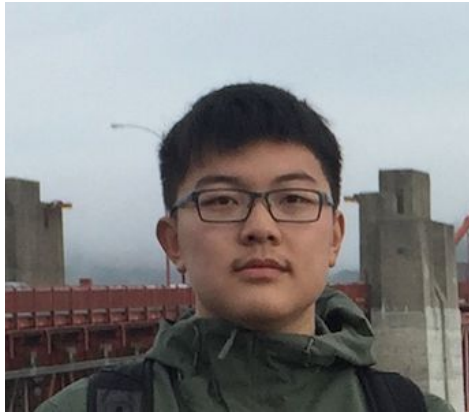
Introduction

DEDIS

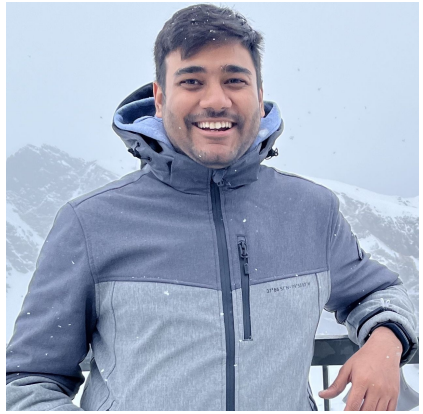
EPFL

Teaching Assistants

Pasindu Tennage



Haoqian Zhang



Rishi Sharma

Please e-mail the instructors at: **cs438@groupes.epfl.ch**

Course Assessment Method

- Homeworks (programming assignments, code reviews): 50%
- Project (accounting for the scope, follow-through in implementation quality and documentation): 50%

5-10+ hours per WEEK

Homeworks

- Build Peerster
  - Peer-to-peer communication using go-lang.
  - Starting with a simple and imperfect message broadcast, then gossip messaging, routing for one-to-one communication, file sharing, and finishing with consensus on file names.
- Four Programming Assignments
  - Built on top of each other (!!)
  - 12.5/100 for each assignment
- Code skeleton provided
- Unit tests and integration tests on GitLab

Homeworks Grading

- Grading using public tests, private integration tests, and code quality using Linter

- Grade = 5 if all public tests pass, the rest from private tests, code quality and resource usage

- Public tests
  - Functional tests (70%)
  - Integration tests (30%)

Code reviews

- Code review and using someone else's code

- If you were unable to complete a homework, or you fully implemented your homework but the poor code design makes it hard for you to build on top, we offer you an alternative
  - 3 random assignments of your colleagues that you need to review
  - Can choose one of them as the base for the next assignment
- Warning: no guarantee on the quality of these 3 assignments

Project

- Group Project (3-4 members)
  - Build on top of (some part of) Peerster
  - Your chance to be creative
  - No individual groups! Minimum 3 members
- Guided topic selection
- Example project topics
  - Voice communication
  - Distributed password management
  - Simulate autonomous cars in a city etc
- Grading method
  - Intermediate deadlines and final exam in January

Tentative Schedule

	HW 0	HW 1	HW 2	HW 3	Project
Week 1					
Week 2					
Week 3					
Week 4					
Week 5					
Week 6					
Week 7					
Week 8					
Week 9					
Week 10					
Week 11					
Week 12					
Week 13					
Week 14					
Exam session					

Lecture schedule

- Lectures by professor Bryan Ford: 10:15-12:00 in INF 1
- In-person TA sessions on Friday 15.15 - 17.00 INJ218
  - Bring all your questions related to homeworks and projects
  - Slack channel to discuss among yourselves
- Monday 13.15 - 15.00
  - Discuss among students and compatibility tests
- Regularly check Moodle for announcements and uploads

Questions?