

# Intro & Housekeeping

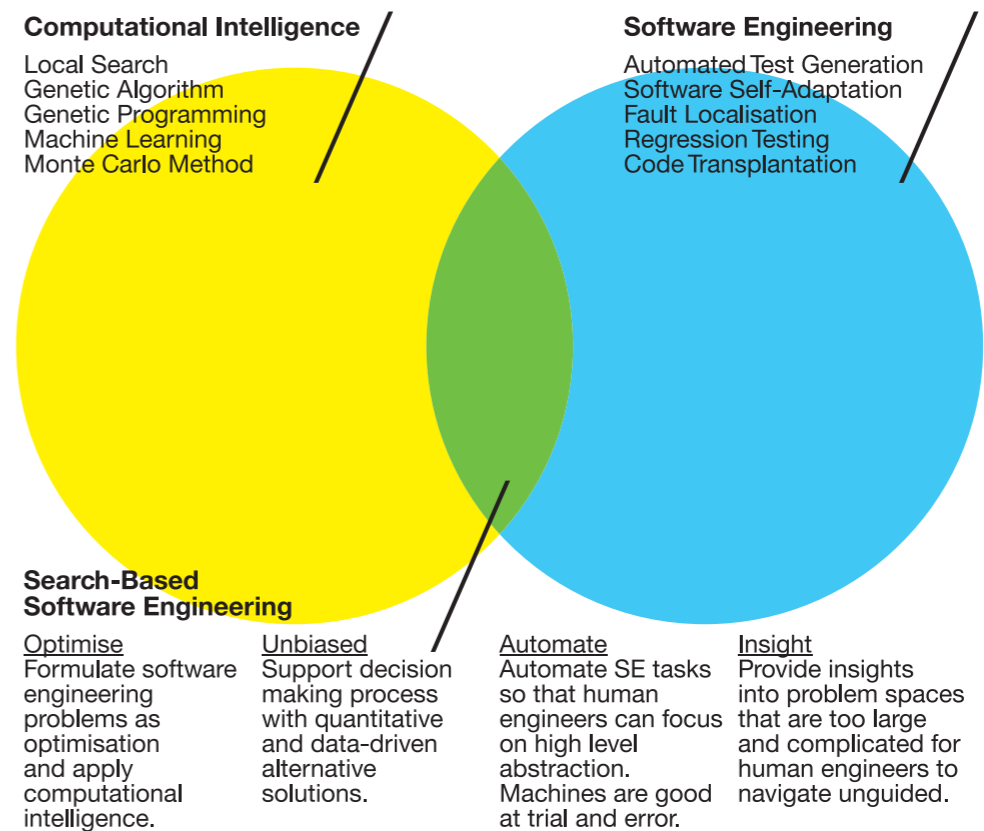
CS489 Computer Ethics and Social Issues, Autumn 2021

Shin Yoo

# Me

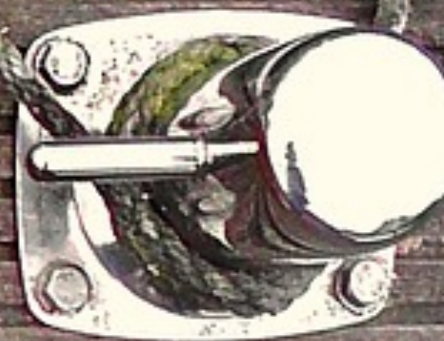
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  - PhD at King's College London, UK
  - Assistant Professor at University College London, UK
- COINSE (Computational Intelligence for Software Engineering) Lab
- Research interest: SBSE, regression testing, automated debugging, evolutionary computation, information theory, program analysis...
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## COMPUTATIONAL INTELLIGENCE FOR SOFTWARE ENGINEERING LAB

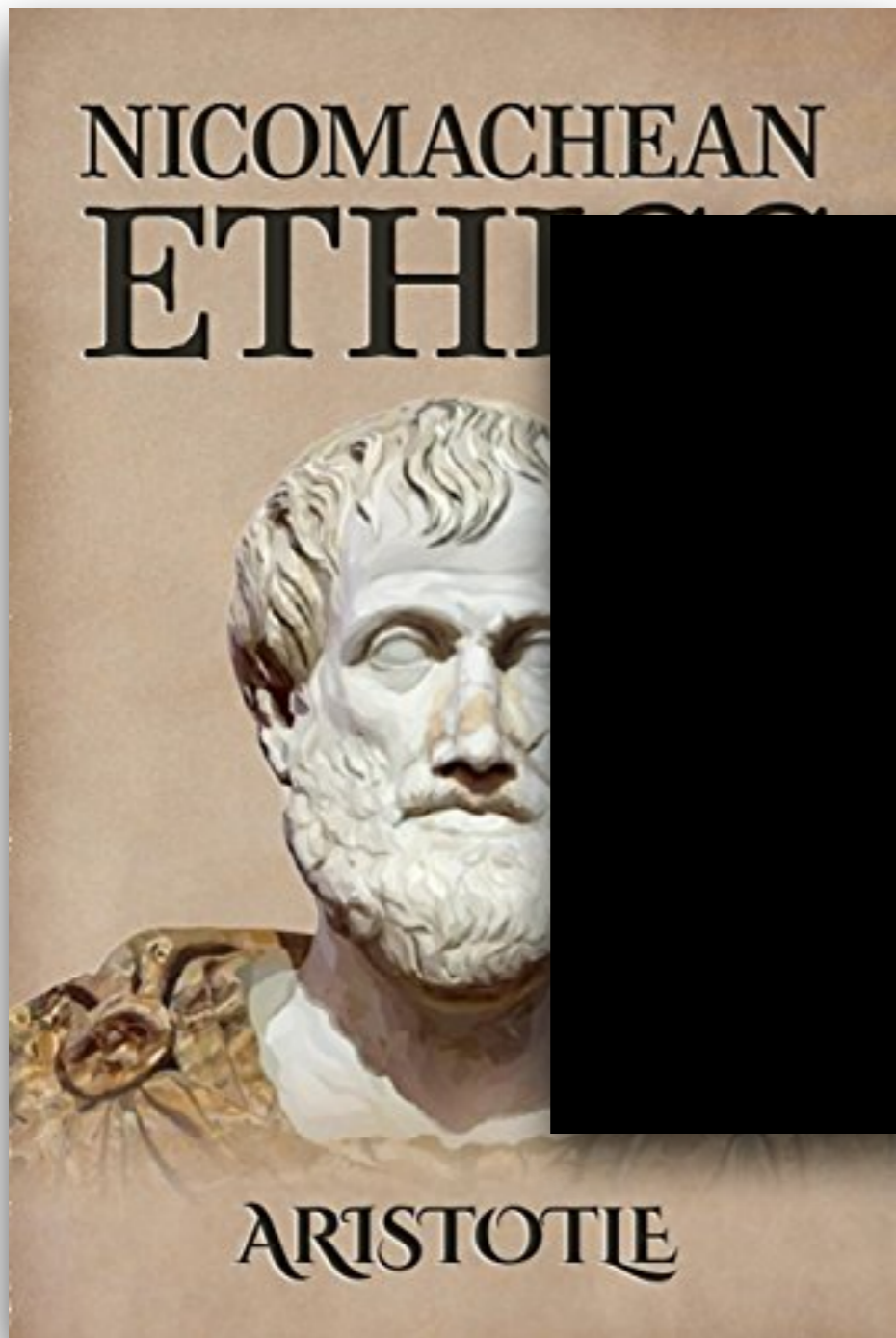


# Why you? 🤔

- CS489 had not been open for some time back in 2018
- I had some ideas I wanted to try out for a course like this
  - So, if anything, I felt brave (reckless?), and not particularly moral
- I do not mean to claim that I have higher moral standard than any of you 😎
- This is the ~~first second~~ third year: by now I should know how things go, but please understand if it is not super smooth...
  - We teach very little theory here... half the course depends on YOU



# **Computer Ethics and Social Issues**



???



**Ethics: learning how to make good decisions**  
**=**  
**applies to all of us, including computer scientists**



**We cannot discuss ethics separated from  
the world we occupy and the actions we take.**

**And the world is covered in software and technology.**



**What we are going to  
learn**

# Ethics and Morality

- Both are about doing the right thing.
- **Ethics** refer to rules and systems that tell you what the right thing is and how to do the right thing.
- **Morality** is a set of principles that govern **your** decisions.
- Ethics as knowledge does not automatically result in a good life.
- Morality cannot be taught as skills or knowledge.

# ...but, “Computer Ethics”!

- Remember, ethics cannot be separated from our actions.
- The primary aim of this course is to “concretise” the discourse about ethics in the context of contemporary, practical, techniques.
- **Do not just talk the good talk.**
- Learn the tools and techniques that can help you make and implement ethical decisions.

## **The “Experience” Side**

- **Read various texts about ethics in computing**
- **Discuss and debate ethical views**
- **Express your thoughts in writing**

## **The “Knowledge” Side**

- **Obtain the latest facts about ethical implications of computing**
- **Learn the state-of-the-art techniques that can help you implement better ethics**

# Technical Topics

- k-anonymity: how to ensure anonymity in databases
- fairness testing: how to check whether an ML model has picked up biases or not
- homomorphic encryption: how to do computation on encrypted data (pending)
- secure multiparty computation: how to do computation without leaking data
- energy testing: how to ensure your software is energy efficient
- clone detection: how to check whether code is original
- statistics: how not to abuse statistics for your results

# Mode of Learning

- I cannot be an expert on all these topics
  - Will invite a couple of experts
- This is 4xx course open to undergraduate/grad students alike
- We will read stuff together

**Use this course as an opportunity to really think hard about ethics: read related books and news articles, express your ideas, and develop projects**

**How about grading?**



# Course Grading

- No exam
- Class Participation: 30%
- Assignments: 40%
- Project: 30%

# Peer Evaluation

- All courseworks and projects will be (partially) peer evaluated: 50% of grades are from me, the remaining 50% are from your peers.
- This is to encourage for you to read the writings of others and to think about them.

# Participation

- There will be a few interactive sessions in various formats  
- do engage and make a lasting impression :)
- Also do a good job with the peer evaluation!

# Communication

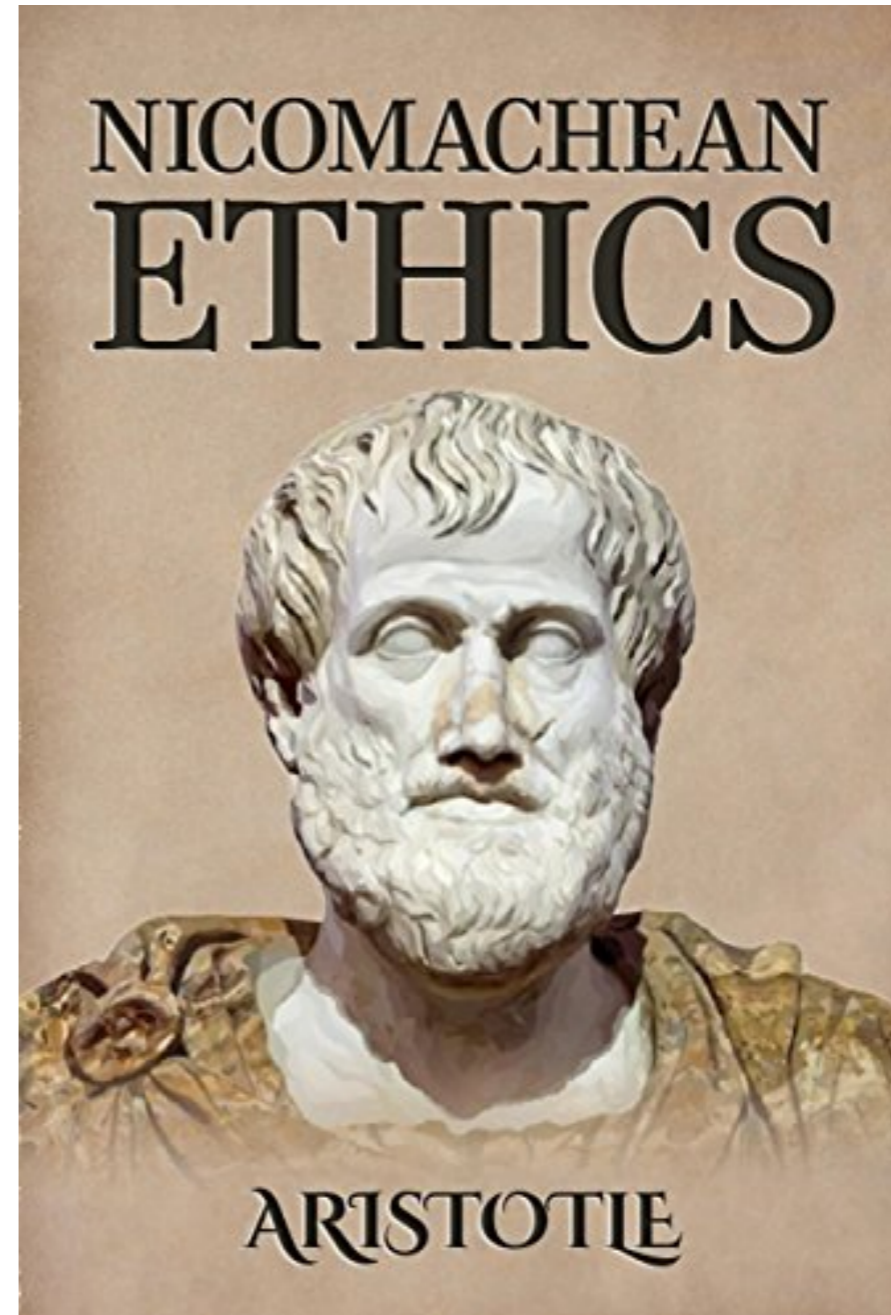
- We will use Slack for all class-related communication: announcements, questions, discussions, provision of additional information and reading materials, etc
- You have to join, no excuse.
- Invitation link will be distributed via email.

# Assignments

- Four course assignments have already been announced with due dates: all are writing assignments:
  1. Ethics, Computers, and Our lives (due 09/08)
  2. The Use of Macro Programs (due 09/29)
  3. Hippocratic Oath for Computer Scientists (due 10/13)
  4. Thoughts on Gig Economy(due 11/09)
- Everyone should write in English; all of the should be minimum 1,000 words.
- Submit **PDFs** via KLMS.

# Ethics, Computers, and Our lives (due 09/08)

- Pick a media coverage (e.g., a newspaper or magazine article) of an event that you think is related to both computer science and ethics. Write a minimum 1,000 words essay to describe what the ethical issue is, how it is related to computer science, and what your opinion is.
- Minimum 1,000 words



# Projects

- This is where you shine with your technical skills.
- Projects are completely open-ended: build \*something\* you think is relevant to ethical issues/what you learnt during this course/what you think is ethically important...
- Consult with me if you are not sure about your ideas.

# Projects

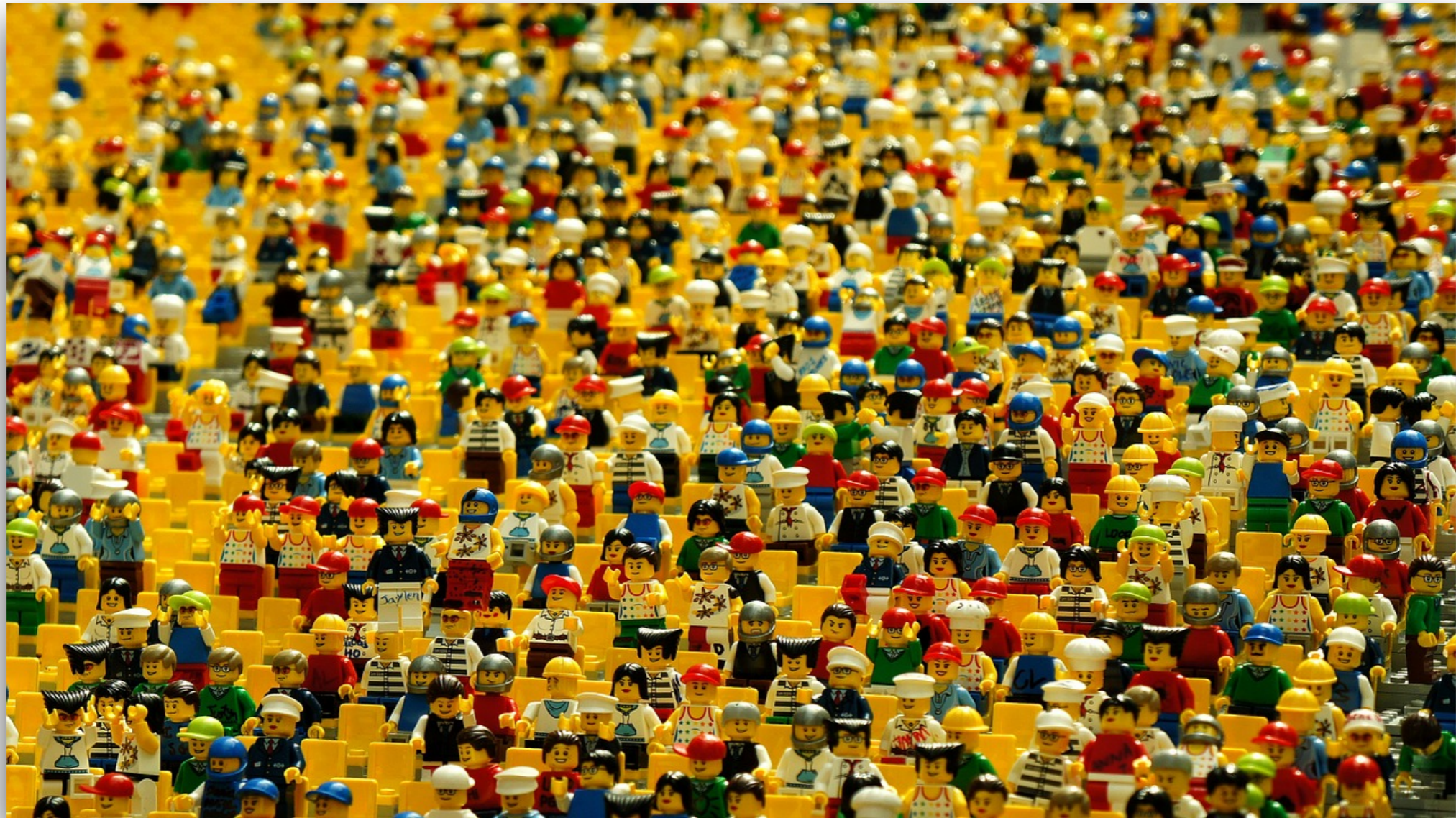
- Project is the reason why you need to be programming-savvy for this course
- The deliverable is your team's GitHub repository: I will consider individual commits as contributions
- Do not do a group commit/push
- Do not say 'I was in charge of documentation and slides'
- Make non-code commits too: slides, notes, reports, etc





# Project: Teams

The original idea was to do everything individually but...



# Project: Teams

- Reasons for doing team based projects:
  - The course had to scale up due to the demands.
  - Basically all your future professional career will be team based, whether you like it or not, and you need to be trained :)
- By default, you should make teams of 3 people: use the #team-building channel on Slack

# Finalising Schedule

- Lecture schedule on course webpage is not complete because:
  - I do not know the final class size, and
  - I have not finalized all the invited lectures, and
  - I have not finalized all the class activities...
- Please bear with me for a bit.

# Final Words

- Follow the email instructions if you want to register outside the class size limit.
- You will not easily get 3 credits so only stay on if you are really committed to the topic.

# Questions?

