

Intelligent Software Systems

Introduction

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Why are you here?

Why Intelligent Software Systems fail?

Activity 1



Introduce yourself
to your group;



Find three common
things among your
group;

Email auto completion/compose

- What would you consider “intelligence” in this context?
- What information might be useful to help you achieve the intelligence?
- How do you know you have achieved the intelligence?
- What might be the challenges that prevent you from achieving such intelligence?

<https://ai.googleblog.com/2018/05/smart-compose-using-neural-networks-to.html>

Lack of high-quality training
data

Inductive Reasoning

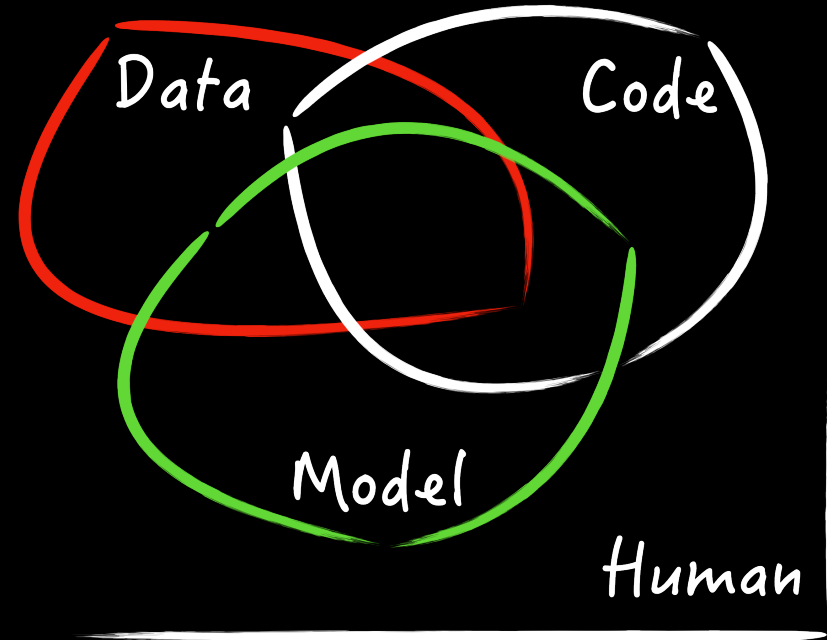
Inter-disciplinary
collaborations and
communication

Lack of
Standardization

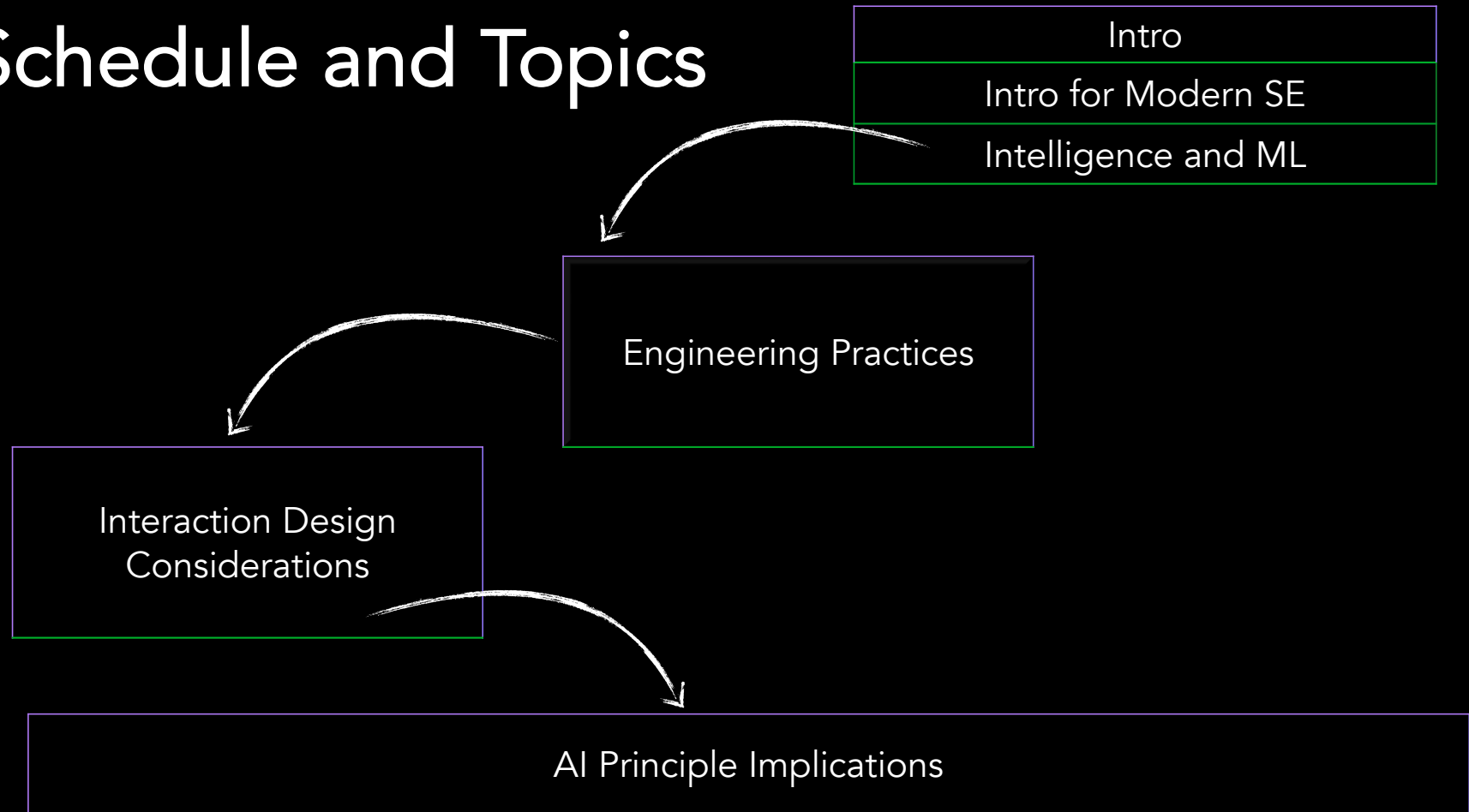
Inadequate testing
or wrong goals

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This course is about



Schedule and Topics



Engineering Practices

Model Quality

From Model to System

Data Acquisition & Management

Requirement and AI

Team and Collaboration

Data Quality

System Quality and Continuous Delivery



Interaction Design Considerations

Human-AI Interaction Design

Visualization

Decision Making

Learning

Creativity

Inclusion



AI Principles

AI principles Overview

Safety

Security and Privacy

Accountability/Auditing

Interpretability and Explainability

Fairness

Value in AI Design



Prerequisite and Related Background

- SE (COMP 303, COMP 361, ECSE 321, ECSE 326,)
- AI (COMP 424, COMP 550, COMP 551, ECSE 526, ...)
- Design (ECSE 424, GLIS 627, GLIS 626, ...)
- Academic/Project Background survey (before the second lecture)

Activity 2

Think about one of your past project related to either SE, AI, or Design:

- Describe the problem you were aiming to address;
- Describe the biggest challenges you have faced on this project.

Assessment

Focus on collaborative learning

- Participation 10% (actively engaged in-class discussions and activities)
- Reading Reports 10% (reading notes on provided materials)
- Assignment 45% (individual assignment and peer review)
- Team project 35% (group of 3-5 people with different background)

During the Class

- Speak up when having questions
- Actively Participate in class activities

Think

Pair

Share

Reflect

Todos

- Join Slack (<https://comp585iss2022.slack.com>)
 - Easiest way to reach out to me, Deeksha (your TA), and your peers;
 - Know more about each other;
 - Find/discuss common interests;
 - Collaborate on assignments and projects.
- Syllabus on [GitHub](#) (schedule, slides, links, assignment).

Who Are We

- Jin Guo
- Deeksha Arya

See you next week!