COURSE OVERVIEW

(Artificial Intelligence)

MARCUS BIRKENKRAHE

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- How will we do it?
    - Classroom sessions
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    - Stuff you bring to class
- What do you have to do to pass?
    - AIMA presentation (> 50%)
    - Session protocol (> 50%)

        - **Weekly participation (> 50%)**
        - **Final AI application (> 50%)**
            - **What constitutes an application?**
            - **Do you have examples for applications?**
            - **Can I design an application?**
- **What's next?**
    - **In the course**
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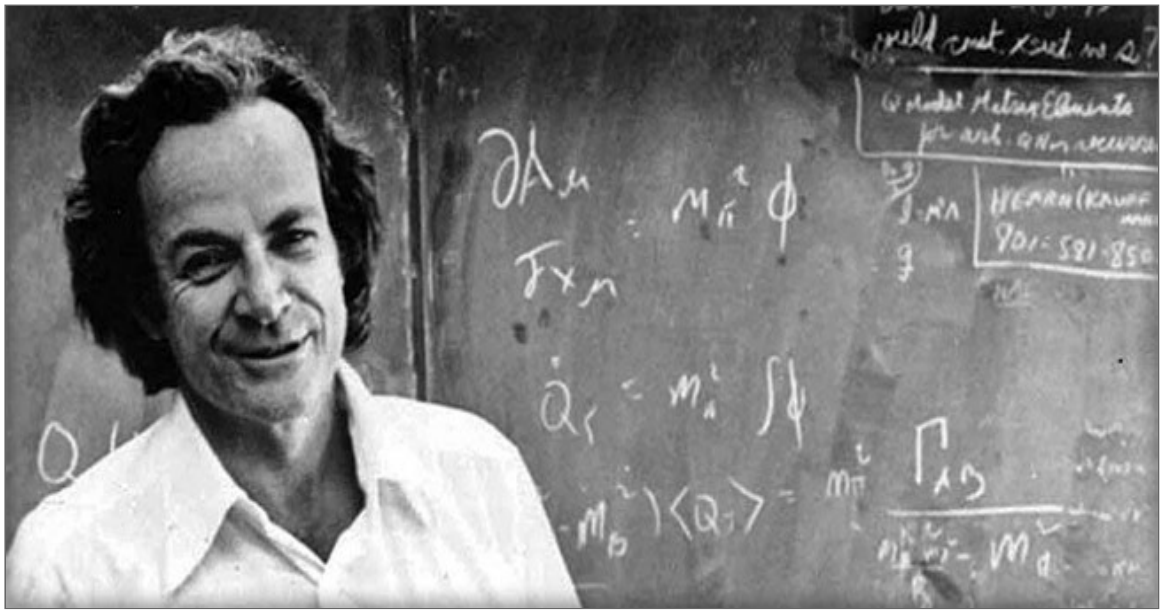
- **Any questions?**

WHAT'RE YOU GOING TO LEARN TODAY?

- Who is your lecturer?
- Who are you and what do you want?
- Which topics will we cover?
- How will we do it?
- What do you have to do to pass?
- What's next?

WHO AM I?

SCIENCE



- Development of WWW
- PhD theoretical particle physics
- 60 research publications
- Assoc. Ed. Int. J. of Data Science
- Ed. Board Int. J. of Big Data Mgmt.
- Scientific member **d-cube@Berlin**

INDUSTRY

- Executive at Accenture & Shell
- Coach and consultant
- Certified psychotherapist
- Startup mentor

TEACHING

- Business informatics @**HWR Berlin**
- Visiting professor of data science @Lyon
- Adviser for **CPU @LA**
- Internship supervision

PLEASURE

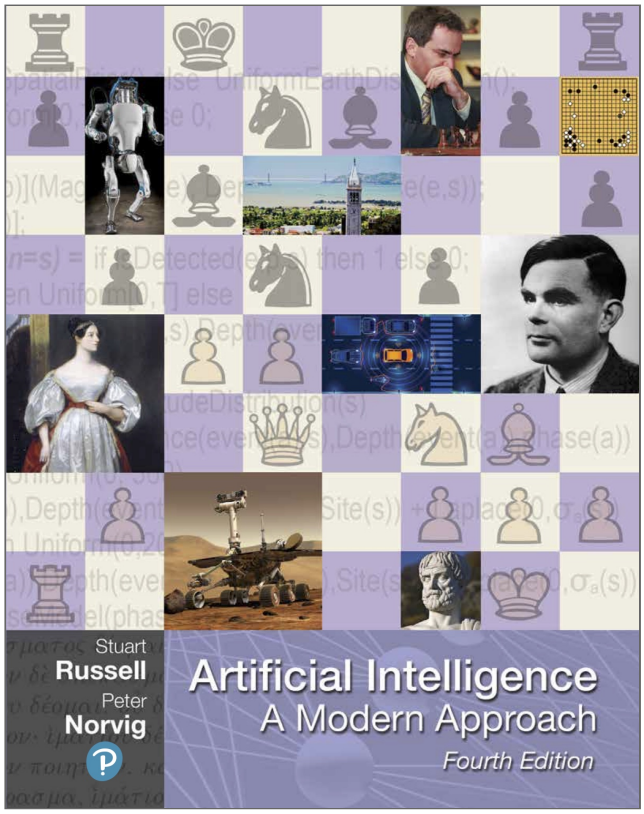
- Playing: **Assassin's Creed Valhalla** (2020)
- Reading: **Waugh, Sword of Honour** (1952-1961)
- Watching: **The Middle** (2009-2018)

WHAT ARE YOUR EXPECTATIONS?

- What do you want to learn here?
- What would you like to avoid?
- What did you take away from another course?
- What did you really not like in another course?

WHICH TOPICS WILL WE COVER?

MODERN APPROACH TO AI



Source: **AIMA, 10th ed.** (2021)

WHAT IS AI?

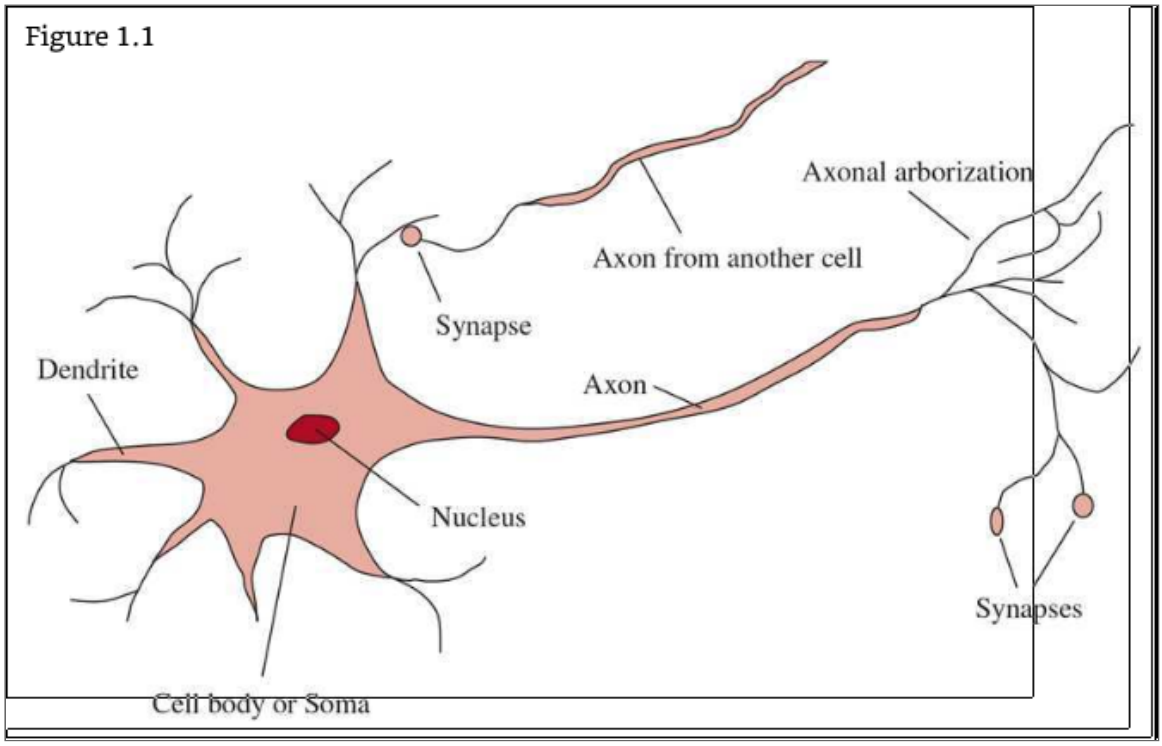
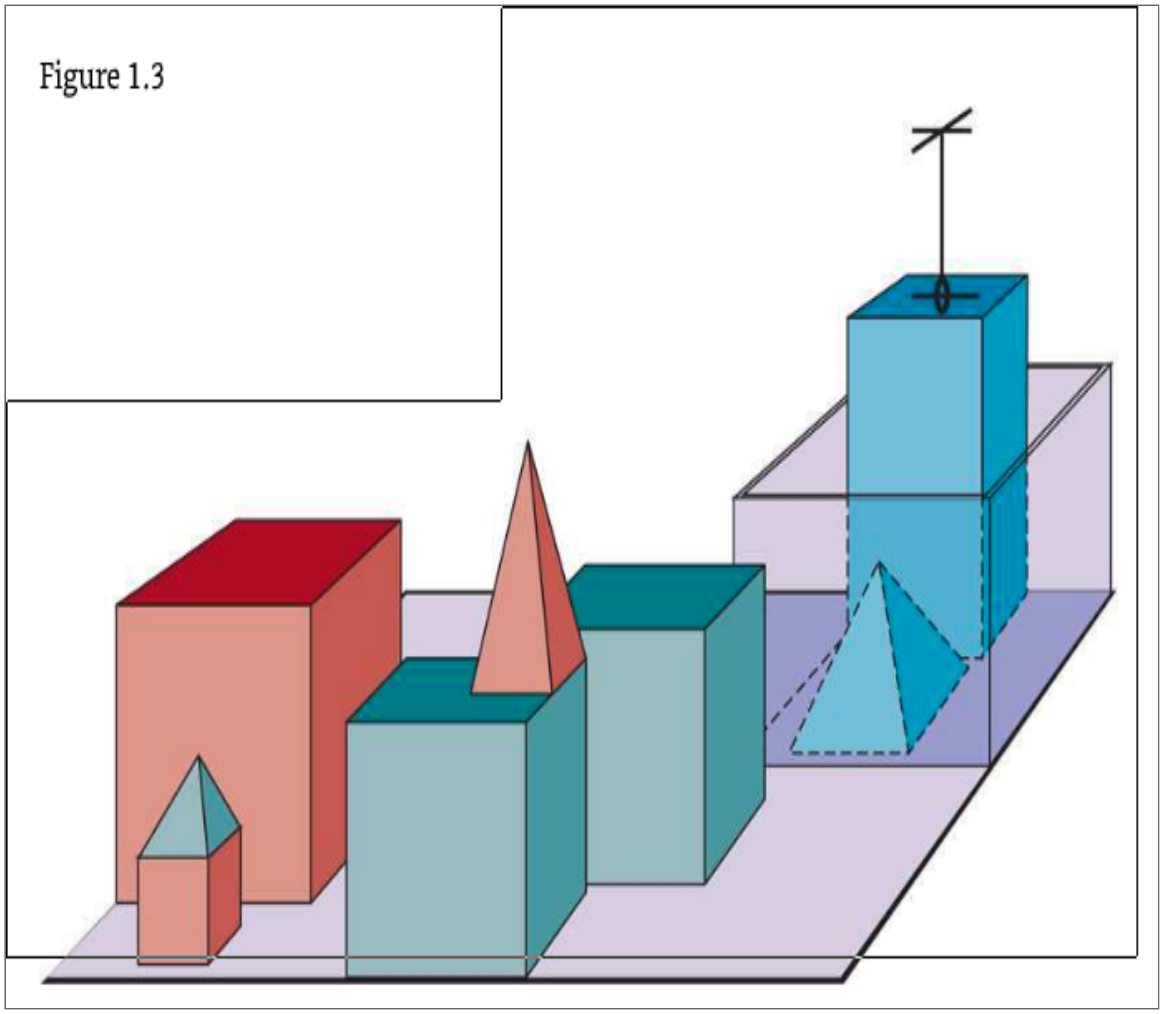
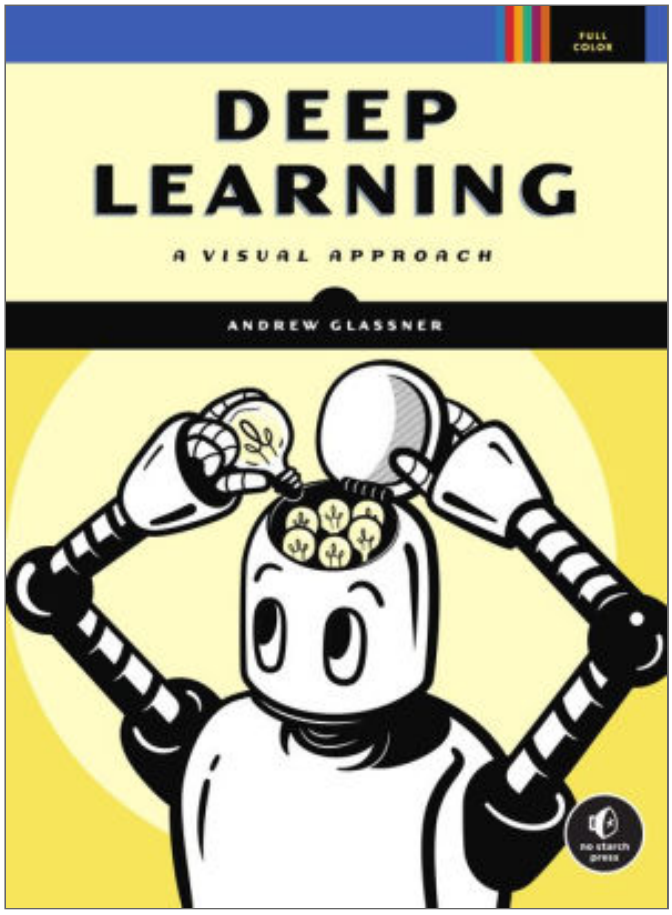


Figure 1.1
Axonal arborization
Axon from another cell
Synapse
Dendrite
Axon
Nucleus
Synapses
Cell body or Soma

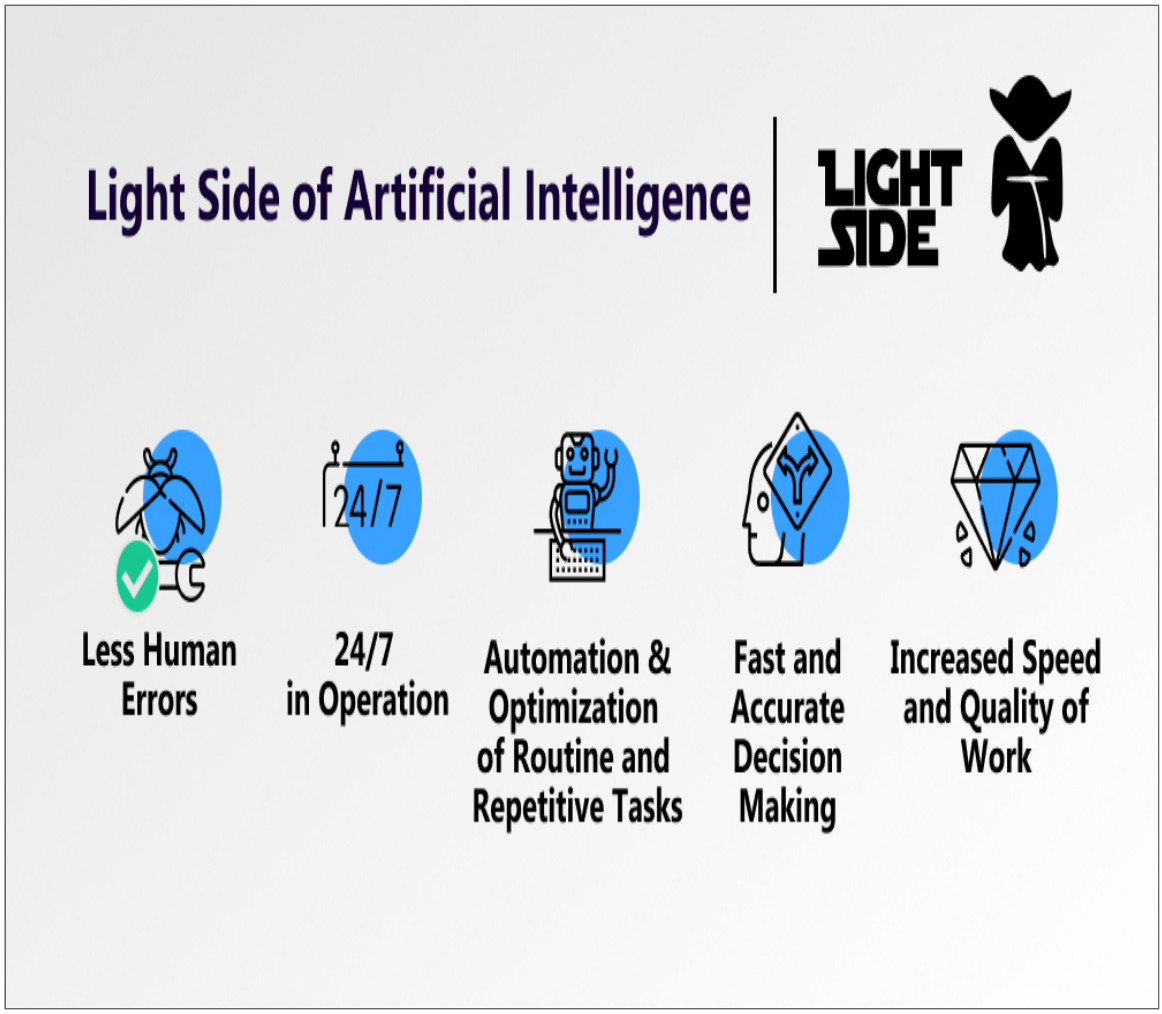
HISTORY OF AI



STATE OF THE ART OF AI



RISKS AND BENEFITS OF AI



Source: **qulix.com** (22 May 2020)

AGILE MANAGEMENT

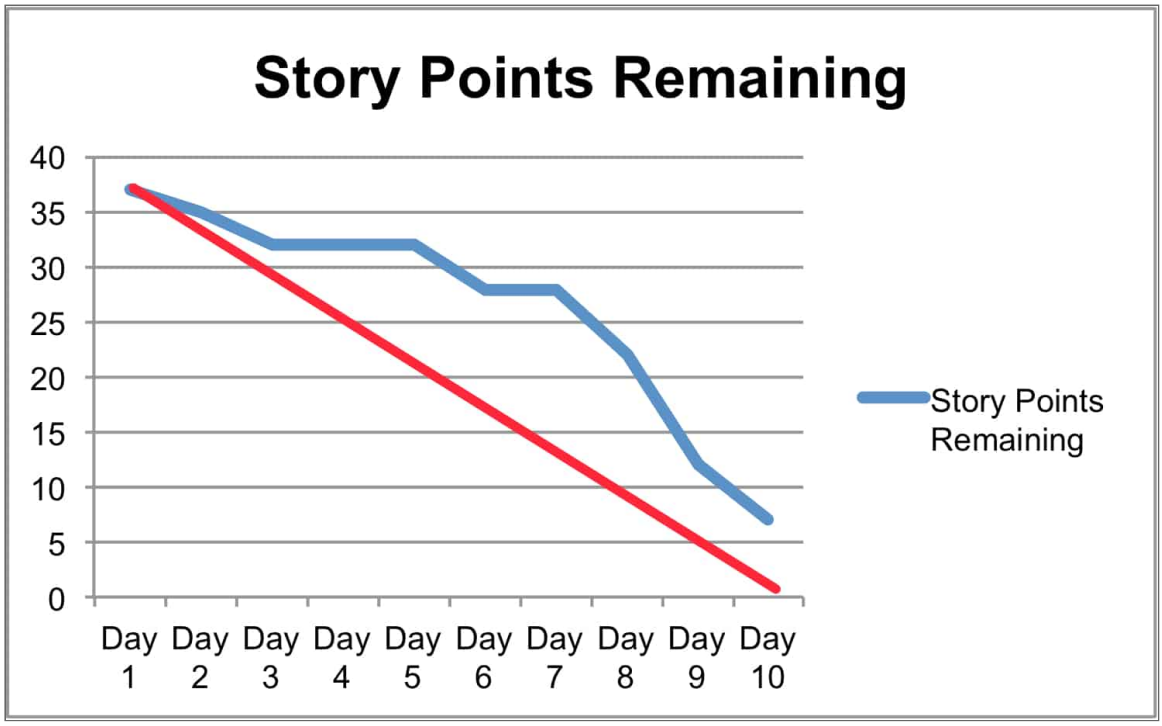
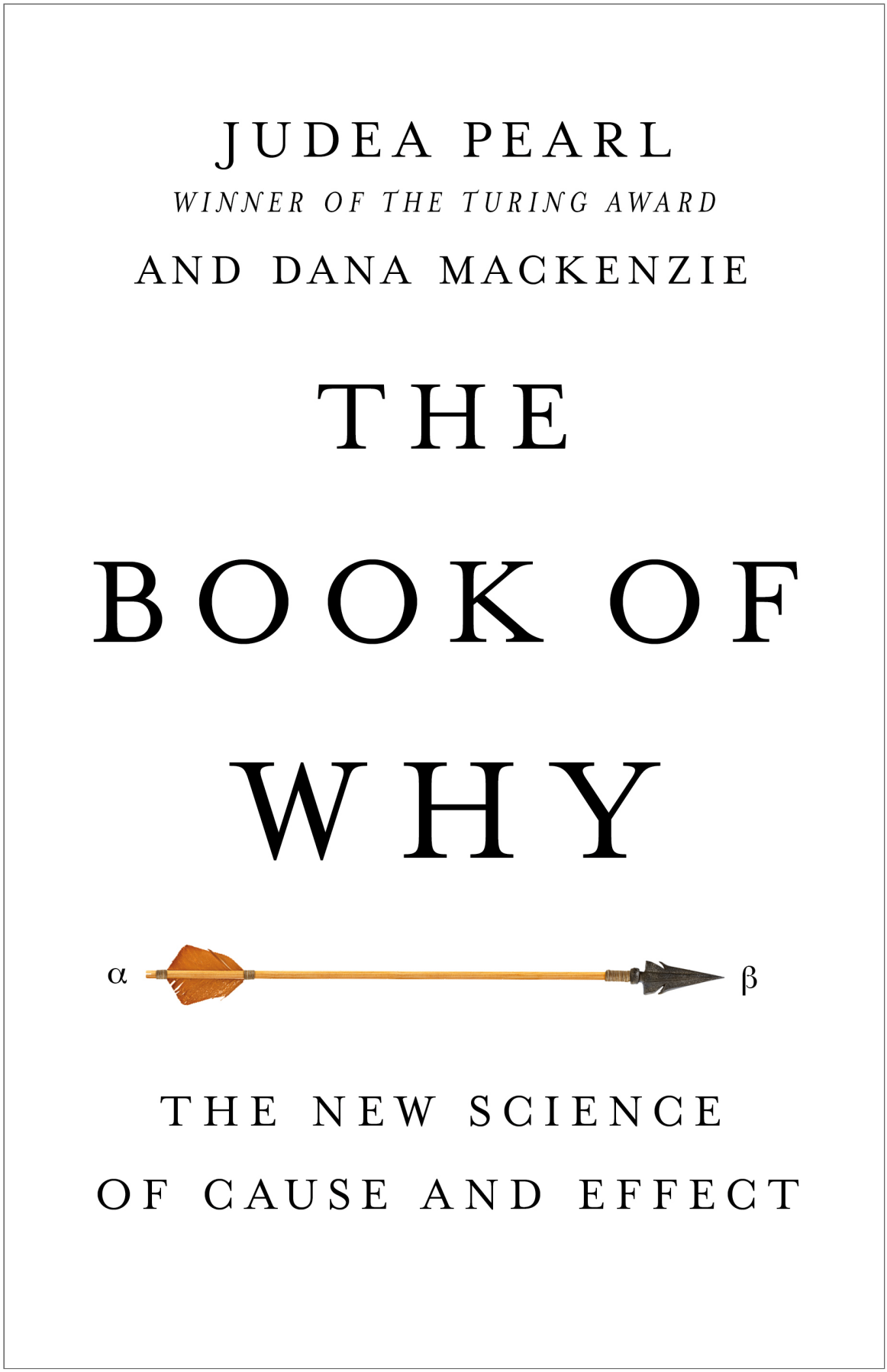


Image: **Scrum** burndown chart

CAUSATION


JUDEA PEARL
WINNER OF THE TURING AWARD
AND DANA MACKENZIE
THE
BOOK OF
WHY
α
β
THE NEW SCIENCE
OF CAUSE AND EFFECT

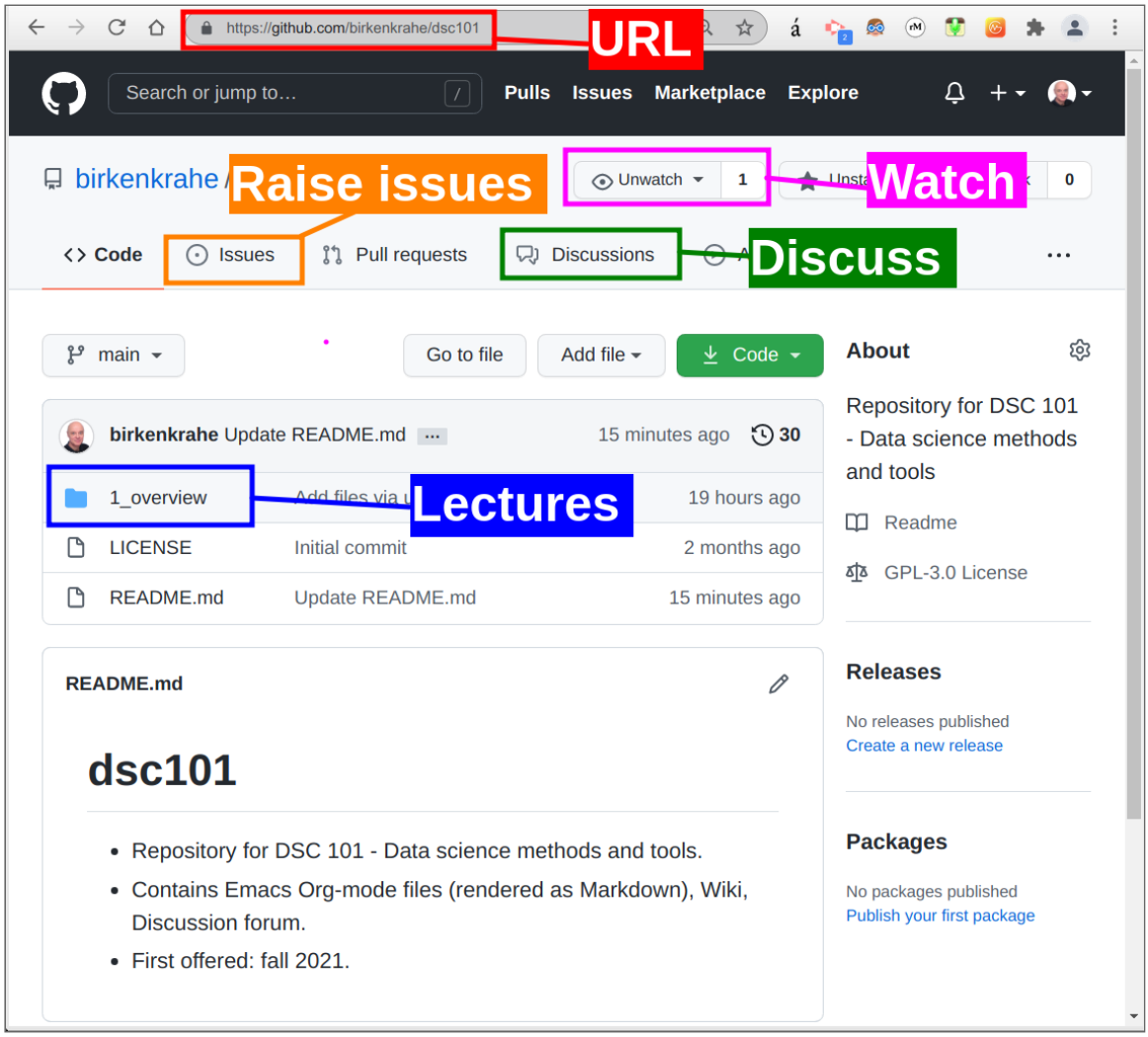
SCHEDULE (SEE **SYLLABUS**)

Image: **Princeton U.**

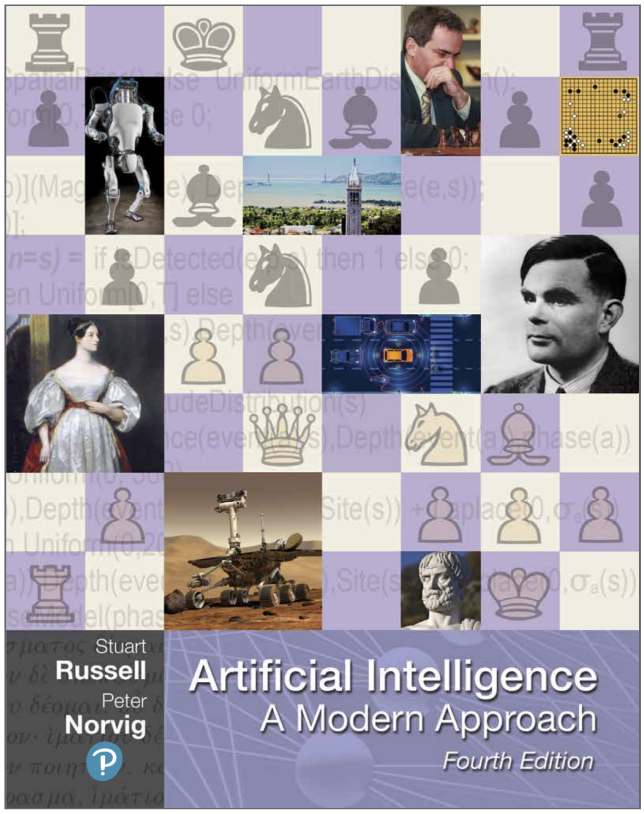
HOW WILL WE DO IT?

CLASSROOM SESSIONS

LECTURE SCRIPTS WITH EXERCISES (GITHUB)



YOUR PRESENTATIONS



YOUR PROTOCOLS

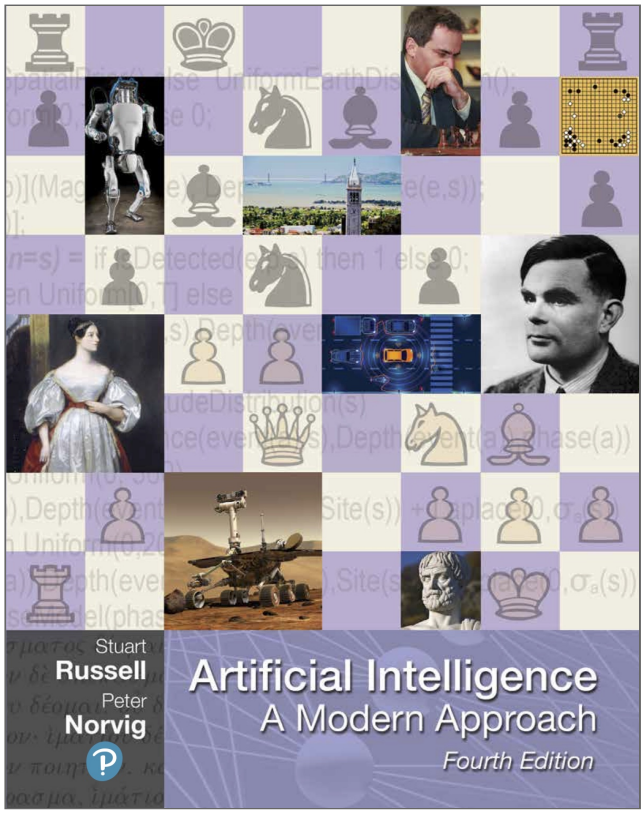
- Image: Unsplash (@**Ryan Arnst**)

STUFF YOU BRING TO CLASS

- Image: Unsplash (@**Evan Demicoli**)

WHAT DO YOU HAVE TO DO TO PASS?

AIMA PRESENTATION (> 50%)



SESSION PROTOCOL (> 50%)

- Image: Unsplash (@**Ryan Arnst**)

WEEKLY PARTICIPATION (> 50%)

FINAL AI APPLICATION (> 50%)

Source: Unsplash (@**Minh Pham**)

WHAT CONSTITUTES AN APPLICATION?

- IMRaD structure (**video**)
- Problem to be solved
- Literature review
- Methodology
- Results / Idea / Business model
- Discussion with limitations
- References

DO YOU HAVE EXAMPLES FOR APPLICATIONS?

- Chapters in AIMA
- (Parts of) Research papers
- Scientific or industry blogs

CAN I DESIGN AN APPLICATION?

- Keep It Simply Scientific (IMRaD)
- Read and take notes (see **FAQ**)
- Researchers are beginners
- Designers are creators

WHAT'S NEXT?

IN THE COURSE

- Lecture "What is AI?"
- Lab discussion and questions
- Come up with application ideas
- Schedule protocol and presentation

YOUR CHALLENGES

What?	When?
Get AIMA (**3rd ed.**/ **4th ed.**)	ASAP
Schedule protocol/presentation	Aug 30
1st sprint review	Sep 10
Check FAQs x 2 in GitHub	n.d.

n | Ask questions (class/GitHub) | n.d. |

**) do this every week until December*

ANY QUESTIONS?

This presentation is available online.