

CS101 - Cognitive Science and Artificial Intelligence - Lecture 1



University of
Strathclyde
Science

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Today

- Preliminaries (who? what? where?)
- Yak Shaving
- A vintage psychotherapist chatbot

What is this course about?

Selected topics in philosophy of mind, cognitive psychology, computational linguistics, and artificial intelligence

Foundational concepts for thinking about cognition and intelligence and understanding modern AI

Some mathematics and practical exercises

Who am I?

William Waites <william.waites@strath.ac.uk>

Room 12.20 Livingstone Tower

Who are your tutors

- Pat Prochacki <pat.prochacki@strath.ac.uk>
- Tochukwu Umeasiegbu <tochukwu.umeasiegbu@strath.ac.uk>
- TBD

Where is this course?

Lecture:

Mondays 14:00-15:00 UC201

Labs:

Mondays 15:00-17:00 in LT1105, LT1201, LT1221, LT1320

Where is this course?

Topic 3 repository

- `https://gitlab.cis.strath.ac.uk/xgb21195/cs101-csai`
- Lecture slides, notes, videos, links to materials

Mattermost

- `https://mattermost.cis.strath.ac.uk/learning/channels/cs101-22-24`
- Discussion, asynchronous Q&A, mutual assistance

Marking Scheme

10% Participation

30% Assignment 1

20% Assignment 2

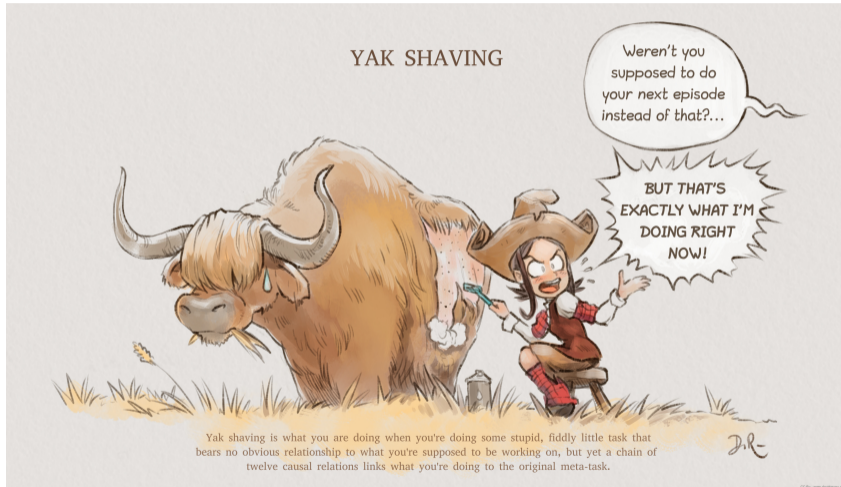
20% Assignment 3

20% Assignment 4

Groups or no groups

- Each student is responsible for their own assignments
- Working in groups is allowed but not required

Yak Shaving



Source: David Revoy - <https://davidrevoy.com/article861>

Assignment 1

... to shave a yak

Goal

Submit coursework in a way that:

1. Has something to do with software development practice
2. Makes it possible to automate marking

Git...

- is a "distributed version control system"
- started as a tool for coordinating the Linux kernel development
- keeps your files *and their change history*
- has a *terrible* user interface but is ubiquitous

Git repositories

A *repository* is a collection of *changes* to files.

You create a repository *on your computer*.

You keep a copy of the repository on a hosting service.

A popular hosting service is Github (Microsoft).

For this course, will use the department's service,

`https://gitlab.cis.strath.ac.uk/`

Push, pull and clone

The word for "making a copy of a repository" is "clone".

To send changes from your computer to a remote repository, you "push" them.

To get changes from a remote repository to your computer, you "pull" them.

More yak shaving

Command line terminals

- Prompt, command, output
- Sort of an antique chatbot that doesn't even bother to try to speak English!
- Somewhat cryptic commands...

Command line basics

pwd where am I? (what directory)

hostname where am I? (which computer)

ls list files

cd change directory

mkdir make directory

cat show what is in a file

git the git tool

ssh get a terminal on a different computer

Yet more yak shaving

Text editors

- pico / nano (easy, terminal)
- **mousepad**, gedit, kate (easy, graphical)
- emacs, vi / vim (not easy)
- Notepad (on Windows)
- TextEdit (on MacOS)
- Many more, pluma, xed, Visual Studio Code, Atom, Pulsar, Spyder, Sublime Text, Notepad++, CudaText, Textadept...

Putting it together

make a directory `mkdir cs101-coursework`

change to it `cd cs101-coursework`

make it a git repo `git init .`

create / edit a file `$EDITOR assignment-1.txt`

add that file to git `git add assignment-1.txt`

commit the changes `git commit -m "first assignment"`

Now you have a git repository with one file in it on your computer.

Sharing your repository (1)

Go to `https://gitlab.cis.strath.ac.uk/`

web browser interlude

1. Create a repository
2. Create an access token (note it down, you will need it)
3. Share it with me (xgb21195) as "reviewer"

Sharing your repository (2)

Join the hosted repository to your local one

```
git remote add gitlab  
https://oauth2:XXXX@gitlab.cis.strath.ac.uk/...
```

Push your work to the hosted repository

```
git push -u gitlab
```

Sharing your repository (3)

Now you have a git repository with a file in it, and a copy on the CIS gitlab server.

But I still do not know where it is! So I wrote a little program for you to tell me. Run the program,

```
/home/xgb21195/bin/cs101
```

```
https://gitlab.cis.strath.ac.uk/...
```

Finished yak shaving!

A classic psychotherapist chatbot

A clone of Joseph Weizenbaum's ELIZA chatbot from the late 1960s

1. Open emacs
2. Type `M-x doctor`

(`M-x` means "meta-x". The "meta" key is ESC or Alt)

You can save a session to a file with `C-x C-s`, control-x and then control-s. Using this file for assignment 1 will get top marks.

Reading for next week

COMPUTING MACHINERY AND INTELLIGENCE, A. M. TURING, 1950

<https://doi.org/10.1093/mind/LIX.236.433>