

Fundamentals of Artificial Intelligence

Programming Exercise CSP

Yuanfei Lin, Deyu Fu, Yingjie Xu, and Ziyue Zhang

Technical University of Munich

November 18, 2022

Constraint Satisfaction Problem: Organizing Water Sports

Student team:

Anna, Barney, Claire, Davin, Elena, Freddy, Gloria and Henry



Stand-Up Paddle/Windsurf/Catamaran/Kayak

General Information - CSP

Start and Deadline

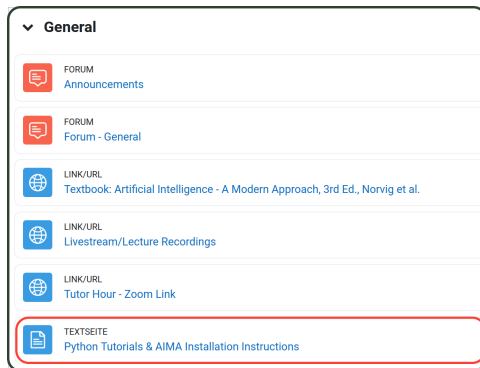
- **Start: 18.11.2022, 18:30**
- **Deadline: 16.12.2022, 23:59**

Framework:

- Publication, Guidelines, and Submission of the exercise on **ARTEMIS** (<https://artemis.ase.in.tum.de/>)
- CSP Exercise description on **Moodle**
- Implementation of your solution in provided **Jupyter Notebook**
- Successful submission → **1 Bonus Point**

Programming Framework - General

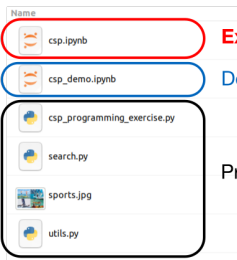
- Programming Language: **Python**
- Work through **AIMA Installation Instructions** on Moodle:
 - Docker (recommended for beginners)
 - Git



ARTEMIS - Set up the exercise

In order to get started with the exercise do the following steps:

- Log into ARTEMIS with TUM Credentials → Find Course "**Fundamentals of AI (IN2406)**"
- Find exercise "**Constraint Satisfaction Problems**" → Click on
- Start exercise → Follow the installation guidance
- Exercise folder will be created in the **homework** folder
`foai22csp-<your_TUM_ID>`



Exercise Notebook: Implement here

Demo Notebook: don't modify

Provided Dependencies: don't modify

ARTEMIS - Implement and Submit Solution

- ① Start the *Jupyter* web-interface:
 - Docker: Go to <http://localhost:8888/> with your browser
 - Git: Enter `cd PATH_TO_YOUR_AIMA_DIRECTORY`, then `jupyter notebook` in your Terminal
- ② Find your exercises under `/homework/foai22csp-<your_TUM_ID>`
- ③ Run **demo notebook** `csp_demo.ipynb` to understand the framework
- ④ **Implement your solution** in `csp.ipynb`
- ⑤ **Submit** to ARTEMIS in your Terminal via git:
 - `git add csp.ipynb`
 - `git config user.email "<your.TUM@email.de>"`
 - `git config user.name "<Your Name>"`
 - `git commit -m "Write a commit message here."`
 - `git push`
- ⑥ **Check evaluation** in ARTEMIS

ARTEMIS - Sucessful Submission

If **all tests have passed** in ARTEMIS your submitted solution is correct.

Clone Repository

Tutor actions: View Scores Participation Submissions Grading Edit

100% (2 days ago) GRADED

Submissions Grading Edit

Programming Framework

For this programming exercise a *Jupyter Notebook* will be used. The template for the exercise can be downloaded from the [template repository](#) and used to set up the environment for the programming exercise.

Installation of the AIMA Python Code

Instructions on how to install the *AIMA python* code can be found in the [AIMA installation instructions](#) file.

Retrieving the template

You can pull the template from ARTEMIS using git. To do so, you need to open up a console:

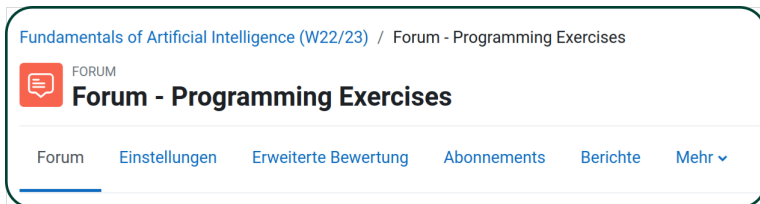
- If you installed *AIMA* through Docker, you can open a console from the main page by clicking on **New**, and then **Terminal** (see figure below). @@@Check that the figure is correctly

Upload New

Notebook:

Questions

For questions regarding the exercise and/or ARTEMIS use the corresponding forum on [Moodle](#)



or attending our [Tutor Hour](#)