

**1MAI1 - MSc Artificial Intelligence**

**CT 5132 Programming and Tools for AI**

**Assignment 03**

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# Abstraction and Reasoning Corpus (ARC)

Abstraction and Reasoning Corpus(ARC) has a set of training and testing samples in form of JSON file. Each JSON file has a task involving a grid of colours (encoded in form of integers 0-9). The aim of ARC is to train the ML algorithm such that it identifies the pattern from the training set and accordingly produces output for the testing set. ARC as defined by François Chollet is “ (Chollet, 2019)”, as the tasks may seems trivial for the human mind but it is difficult to train an algorithm to identify the pattern in the task and to produce the output grid accordingly.

Hence, a sample of four tasks was selected and hand coded in python. A python file has solution for one task and the details for the tasks are as given below:

|  |  |
| --- | --- |
|  |  |
| Git Repository | <https://github.com/RakshaPRao/ARC> |
| Tasks Attempted | 29c11459 |
| 746b3537 |
| a699fb00 |
| aabf363d |

# Task Description and Implementation Details

1. **Common Functionalities (ioOps)**

Task description

1. **Task File 29c11459**

Task description

1. **Task File 746b3537**

Task description

1. **Task File a699fb00**

Task description

1. **Task File aabf363d**

Task description

# Insight of Python Functionality in Implementation

# Conclusion (Not sure if we should include)

# Contributions

# Bibliography

Chollet, F. (2019, Nov 27). Retrieved from https://arxiv.org/pdf/1911.01547.pdf

ToDo:

* If you wish, you may write or call code inside solve which converts JSON to Numpy arrays or any other format, to be used in your processing, and then later convert back to JSON to be returned.
* At least one colour image depicting an input-output pair
* Appropriate use of git/Github, including changing the README.md to reflect the purpose of the repository