**What is Surround?**

Surround is an open-source framework developed by the [Applied Artificial Intelligence Institute](https://a2i2.deakin.edu.au/) (A2I2) to make machine learning process easy from data exploration till useful information production.

**Purpose**

It is compatible with existing Machine learning frameworks i.e. (TensorFlow, Pytorch etc.) and with cloud services. The main purpose of Surround AI is to minimize the gap between researchers and engineers. It provides “production first” approach with some conventions for researchers. So, the solutions of engineers remain structured which help them to code the problem easily while it also provides solutions of most common Machine Learning problems such as “managing configuration” etc. So, developers don’t need to worry about that.

**Compatibility**

Surround have a built-up library in Python. The reason of this library is to provide an easy way to load data from any entry point. For example, Http link, file system or from a queue. Surround also provides advance functionality by enabling the wrapper around libraries such as Tornado Web Server to provide advanced functionality, but this functionality does not come with Surround library by default and needs to be installed separately.

**Command Line Interface**

Surround also works on Command Line Interface (CLI) and its main tools are:

Init: Used to initialize a new project

Lint: It runs the Surround Linter which confirms either Surround conventions are followed correctly or not

Run: It runs the program defined in dodo.py file

Linter works like an assistant and saves engineer time while automatically regulating the conventions.Tools defined above are added automatically and can be used directly.

**Working**

* Assembler
* Stages
* Configuration
* Data