Apprentice Python Documentation

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Contents:

The Apprentice Learner Architecture provides a framework for modeling and simulating learners working educational technologies. There are three general GitHub repositories for the AL Project:

1. **AL_Core** (https://github.com/apprenticelearner/AL_Core), which is the core library for learner modeling used to configure and instantiate agents and author their background knowledge.

2. **AL_Train** (https://github.com/apprenticelearner/AL_Train), which contains code for interfacing AL agents with CTAT-HTML tutors and running training experiments.

3. **AL_Outerloop** (this repository), which provides additional functionality to AL_Train simulating adaptive curricula.

This repository does the following:

1. Provides functionality to the *altrain* script to use adaptive sequencing controllers for learner simulations.

CHAPTER 1

Installation

To install the AL_Outerloop library, first follow the installation instructions for the AL_Core and AL_Train Libraries. Next, clone the respository to your machine using the GitHub deskptop application or by running the following command in a terminal / command line:

```
git clone https://github.com/apprenticelearner/AL_Outerloop
```

Navigate to the directory where you cloned AL_Outerloop in a terminal / command line and run:

```
python -m pip install -e .
```

Everything should now be fully installed and ready.

Important Links

- Source code: https://github.com/apprenticelearner/AL_Outerloop

- Documentation: https://al-core.readthedocs.io/en/latest/

Examples

We have created a number of examples to demonstrate basic usage of the Appentice Learner that make use of this repository as well as the AL_Core and AL_Train Libraries. These can be found on the examples page of the AL_Core wiki.

CHAPTER 4

Citing this Software

If you use the broader Apprentice Learner Architecture in a scientific publication, then we would appreciate a citation of the following paper:

Christopher J MacLellan, Erik Harpstead, Rony Patel, and Kenneth R Koedinger. 2016. The Apprentice Learner Architecture: Closing the loop between learning theory and educational data. In Proceedings of the 9th International Conference on Educational Data Mining - EDM '16, 151–158. Retrieved from http://www.educationaldatamining.org/EDM2016/proceedings/paper_118.pdf

Bibtex entry:

```
@inproceedings{MacLellan2016a,
author = {MacLellan, Christopher J and Harpstead, Erik and Patel, Rony and Koedinger,␣
↪Kenneth R},
booktitle = {Proceedings of the 9th International Conference on Educational Data␣
↪Mining - EDM '16},
pages = {151--158},
title = {{The Apprentice Learner Architecture: Closing the loop between learning␣
↪theory and educational data}},
url = {http://www.educationaldatamining.org/EDM2016/proceedings/paper{\_}118.pdf},
year = {2016}
}
```

Indices and tables

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