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| **REFERENCE DETAILS** | myPhysicsLab Moveable Pendulum 2021, Myphysicslab.com, viewed 20 July 2024, <https://www.myphysicslab.com/pendulum/moveable-pendulum-en.html>. | |
| **Reliability** | This source is very reliable, as the simulation provided at the top of the page seems very accurate and provides the physics formulas they used, and the derivations to show they are accurate. | |
| **Authority/CREDIBILITY** | Author has 2 degrees, one in mathematics and has been developing physics simulations for over 20 years | |
| **Purpose** | The author developed this website as both an online science museum and as a personal project. | |
| **Key Information:**   * Formula for angular acceleration of a pendulum on a moving pivot () * Example simulation to double check against | | |
| **USEFULNESS** | | LIMITATIONS |
| I can apply the acceleration formula gained from this source in a physics simulation if I decide to build it myself with no libraries or sources. This source helps answer sub-question 1 ( How can I use or build an accurate 2D simulation that models a cart pendulum system realistically), which is all about finding or building a physics simulation. The source was very easy to understand, as it has an intuative simulation at the top of the page and a step by step derivation with variable definitions of the final formula. The source should be very accurate, as if there were any inconsistencies within the final formula, I could notice it within my simulation or the example simulation. | | The source does not have a coded implementation of the formula and it is left to me to implement it. The source does contribute to my first subquestion, but may not be applicable if I decide to use a premade physics engine or library. Without testing the formula, there is no way to know if it the right one for my simulation, and it may not function correctly for my simulation. The source also does not have any further useful information beyond the formula. |
| **CAPABILITY** | | |
| This source will help me develop my skills in *Information and Communication Technologies* and my *Critical and Creative Thinking*. This is because I will need to convert the mathematical formula into code that a computer can understand, and then debug and adjust it if it doesn’t work properly. | | |

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| **REFERENCE DETAILS** | Pezza’s Work 2024, *How to train simple AIs*, *YouTube*, viewed 13 August 2024, <https://www.youtube.com/watch?v=EvV5Qtp\_fYg>. | |
| **Reliability** | This source is reliable, as the thought process is shown throughout the whole video and each change is explained, and the results of the final model is shown. | |
| **Authority/CREDIBILITY** | The author Pezzza may not be as credible as someone like Grant Sanderson (3blue1brown on youtube), but has almost 150 thousand subscribers by working on primarily AI and ML content on their channel. | |
| **Purpose** | The video aims to explain how machine learning works to an audience that likely doesn’t know much about it as to not overwhelm them while giving them an introduction. It aims to show how you can apply an MLA and design one. | |
| **Relevance** | This source is very relevant to my research, as it is a similar application to mine and explains several thought processes to help me understand. | |
| **Key Information:**   * Covers basic concepts in training machine learning algorithms, using reinforcement learning in a cart-pendulum simulation as an example. * Covers basic MLA concepts and training methods * Uses reinforcement learning in a 2d cart pendulum simulation, similar to my application. | | |
| **USEFULNESS** | | LIMITATIONS |
| This source gives an example of a reinforcement learning MLA which is directly relevant to my research. It visually and easily explains how an MLA can learn to stabilize a pendulume through several generations and iterations with feedback, which is very similar to how most of my training methods will occur. The approach taken in the video helps bridge theory to application and makes it easier to grasp the basic aspects for my research. | | While very relevant to my research, this source has limited application. It focuses on using a basic implementation without diving into more advanced topics such as complex algorithm design or potential challenges in real world scenarios. Additionally, it doesn’t provide any indepth mathematical explanations or alternative methods of learning, instead just following down the same road for the whole video. Investigating several methods may help develop a more effective MLA and is directly relevant to my research. |
| **CAPABILITY** | | |
| This source helps me develop my *Critical and Creative Thinking* as it explains thinking processes and subtly hints towards how to think by yourself and develop the MLA independandtly. | | |