**Research Pre-Proposal**

*The purpose of this pre-proposal is to help guide you as to whether your idea for your research is do-able or not. There are many things that can cause roadblocks to good research. Some of them include*

1. *Projects that are too broad*
2. *Proposals that do not take safety into account (e.g., using carcinogens)*
3. *Projects that have already been done*
4. *Projects that are impractical from an equipment perspective*
5. *Projects that AOS faculty have already informed you are not feasible*

**Please fill return the entire form to your research teacher by Wednesday 5/13/2015. Bring a hard copy to class and submit onto turnitin.com by 9:45am.**

**Student name: Aryan Deorah**

**Subject area of research: Math Modeling**

**The faculty member who helped you the most with this idea: Mr. Writer**

**5 sentence (max) description of what you will be doing:**

**I will be using data from the Uniform Crime Report and other information on gun laws and gun violence to determine which gun laws will have the most effect on different types of gun violence. I will start with local jurisdictions and once the machine is trained enough, I will move onto the state and federal levels. I will use an algorithm to quantify the strength of the laws in a given jurisdiction and then use machine learning to get a sense of different factors in gun laws that affect gun violence as well as control for factors such as economic factors and laws in neighboring jurisdictions. In order to train the supervised code system, I will run statistical tests on pre-existing data to receive expected outputs. I will be accomplishing the machine learning side of the project using code frameworks such as Tensorflow.**

**Any materials you know you will need, especially ones that are potentially dangerous or expensive: (We know this list will grow in the future.)**

**Python software**

**Gun violence and law data**

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**Teacher Evaluation: \_\_\_\_\_\_Doable (with slight modification) \_\_\_\_\_\_Doable with much modification \_\_\_\_\_\_Not doable**

**Teacher with whom student should discuss project next:**

**Teacher Comments:**