Senior Thesis Proposal

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1. What is the title of your project?

Introduction to AI learning - Emotion Recognition Based on Deep Learning

2. Topic Statement

  The goal of this senior project is to study the basics of programming on AI systems, including studying concepts of different Artificial Neural Networks, mainly focused on several deep learning models.

3. Practical Component
- A system can identify facial emotions of people in the pictures.
- Project research paper will be submitted for publications to Journal of Emerging Investigators that will also participate in Google Science Fair and MIT think.

4. Artistic Component
- ~~Abstract Art: represents the model of neural network, psychological crises.~~
- Original Tropical House

5. Insights

  During my project, I hope I can find out potential ways that I can work on to benefit the society with advanced technology.

6. New skills or abilities

  I'm aiming to obtain skills and abilities such as programming with Matlab and Python, using Ubuntu system and writing formal scientific research paper. Any further efforts in programming in general is already stretching my current level of ability, especially advanced topics such as AI, which are usually offered in college course starts with 4XX and 5XX. I hope to gain the basic understanding of programming AI so that I can be ready for future study on this topics.

7. Materials and practical resources
- Matlab: free for 30 days trial. It will only be needed for processing database in the beginning of the project, so 30 days will be enough.
- PyCharm CE: free
- Online Database EMOtic: free
- Research Materials: free. Mentor has a variety of research papers on image classification and emotion recognition that can be shared with me through email in PDF.
- WeChat (for communication with mentor): free
- Potential cost: $0

8. How will you measure or show that your project has achieved its goal?