AI Course

Capstone Project   
Action Plan

For students (instructor’s review required)

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| Course | AI Course |
| Team Name | Insomniac |
| Team Leader/  Members | Trịnh Minh Hiếu/  Hà Tấn Hiệp, Nguyễn Kiên An, Nguyễn Mạnh Khang, Nguyễn Thái Bình, Nguyễn Vân An |
| Project Title | Facial age estimation |
| Goal |  |
| Model can recognize human face and estimate people age by their images despite gender or race. | |
| Abstract |  |
| In morden age, along with the development of the world, children easily access many things including alcohol, cigarette, money transaction and explicit content. That status require something to exactly verify someone is old enough to do something. This project provide a solution for that problem by estimate people image using images. | |
| Method |  |
| This research using Resnet-50 (2015) model architecture. Model will be trained using dataset acquired from the Internet. Later, it will be tuning hyperparameter to compare prediction results and choose the best model among them. | |

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| Data |  |
| The data used in this project will be images. We are going to get them from the Internet by dataset sources like Kaggle, Google Dataset Search, ect. Data will be preprocessed first then normalized and coverted into 128 x 128 size and finally added into Input layer of model. | |
| Expected  Outcome |  |
| FEA model can recognize human face and estimate almost correct a person age by images using computer vision with slightly gap compare to real age (about 2-4 years old).  If the goal is reached, the model can be used as a final verify step to warn people if they are not old enough to do something like microtransaction, access adult content, buying alcohol or cigarette, ect. | |
| Role by  Member |  |
| **Members: (6 Members):**   * ​Trịnh Minh Hiếu: *Team Leader* * ​Nguyễn Mạnh Khang: *Team Member* * ​Nguyễn Kiên An: *Team Member* * ​Nguyễn Thái Bình: *Team Member* * ​Hà Tấn Hiệp: *Team Member* * ​Nguyễn Vân Anh: *Team Member*   **Mission:**   * All members: Research model architecture and contribute in tuning parameters in training process. * Data Acquisition and preprocessing: *Hà Tấn Hiệp* * Design model and implement in code: *Hà Tấn Hiệp, Trịnh Minh Hiếu, Nguyễn Kiên An, Nguyễn Mạnh Khanh, Nguyễn Thái Bình, Nguyễn Vân An* * Training model and testing model’s improvement: *Trịnh Minh Hiếu* * Deploy model using web platform and creating user interface (UI): *Hà Tấn Hiệp* * Writing Report: *Hà Tấn Hiệp, Nguyễn Kiên An* | |
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| Schedule  Summary |  |
| 1. Data Acquisition: Start Date: 7/14/2024 – End Date: 7/23/2024 2. Design Model: Start Date: 7/23/2024 – End Date: 7/30/2024 3. Training Model: Start Date: 7/23/2024 – End Date: 4. Testing and improvement: Start Date: 8/1/2024 – End Date: 8/14/2024 5. Creating User Interface: Start Date: 8/1/2024 – End Date: 8/14/2024   Writing Report: Start Date: 8/1/2024 – End Date: 8/14/2024  Detail: [SIC\_AI\_Capstone Project\_Work Breakdown.xlsx](SIC_AI_Capstone%20Project_Work%20Breakdown.xlsx) | |
| Comment &  Assessment |  |
| <Comment and assessment **by the instructor.**> | |