**Hardware & Software Requirements**

* Windows 10 OS Laptop/Desktop
* Device with NVIDIA Graphic Card (with CUDA ability)
* Visual Studio Code (with Python extension installed in VS Code)
  + System version - <https://code.visualstudio.com/download>
* Microsoft C++ Build Tools
  + <https://visualstudio.microsoft.com/visual-cpp-build-tools/>

Graphical user interface

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* Python interpreter
  + <https://www.python.org/downloads/release/python-391/>
* Anaconda Environment
  + Windows - <https://docs.anaconda.com/anaconda/install/windows/>
* Microsoft Visual C++ 2015 Redistributable Update 3
  + <https://visualstudio.microsoft.com/vs/older-downloads/#microsoft-visual-c-2015-redistributable-update-3>
* Install PIP and add to windows environment variables
  + <https://phoenixnap.com/kb/install-pip-windows>

**Installation Setup**

1. Ensure your device had fulfilled the requirements above.
2. Extract the "FYP-eVision" folder in the source code zip to the desktop location.
3. Initiate Visual Studio Code and click File > Open Folder and selected the "FYP-eVision" folder that you had extracted.

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1. Open new vs code terminal.

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1. In the terminate type in 'conda env create -f conda-gpu.yml' without the quotes to create a new interpreter environment for initiate the system.

(If the conda command is not recognized in VS Code terminal, go to Anaconda Prompt and type ‘conda init powershell’, then restart a new terminal in your VS Code and try again with command above to create the environment)

(Recreate the environment if encountered errors, please uninstall and re-install the environment)

('conda env remove -n conda-cuda-gpu' -> to uninstall the environment, then 'conda env create -f conda-gpu.yml' again to install the environment)

1. After successful creation of environment, activate the environment created by using ‘conda activate conda-cuda-gpu’

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1. In the vscode terminal, cd to keras-retinanet-library folder

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1. Install the keras-retinanet-lirbrary using 'pip install . --user' and 'python setup.py build\_ext --inplace'
2. Navigate to eVision.py file and change the interpreter to the conda-cuda-gpu that had been created.

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1. Initiate the eVision.py file.

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1. The e-Vision login page will be displayed and login with a valid credential account (see detail in end of page for credentials access)

Graphical user interface, application

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1. Web browser will be popped up to ask to log in to any google email credential. (Will only need to do for first time access to the system)

Graphical user interface, text, application

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1. After entered the valid credential, click on 'Advanced' and click on 'Go to e-Vision Desktop App'.

Graphical user interface, text, application

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1. Then, allow access by click on 'Continue' button.

Graphical user interface, text, application

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1. Once completed, the e-Vision application will be able to logon successfully. (Can continue to access with other features of e-Vision)

Note: any extra initiation package errors, can use pip install to resolve.

**e-Vision Master Admin Credential:**

* Email: evisionmalaysia@gmail.com
* Password: admin1010