Notes :

* **Natural Disaster Management Dataset – consists of two small datasets:**

1. Aerial Images – suitable for segmentation
2. Disaster Images for classification

* **Aerial Images – suitable for segmentation**
* Water Images
* Some images from AIDER dataset
* Post – Fire images ( Paphos, Armenoxori)
* Post – Flood images – Mega (need to find a way to download them)
* **Disaster Images for classification**
* **Fire**
* **Noral**
* **Flood**
* **Building disaster**
* **Land Disaster**

**Results from** [**https://teachablemachine.withgoogle.com/**](https://teachablemachine.withgoogle.com/)

**2 classes: Fire / no Fire ( general negatives)**

**- datasets:**

Train: Comprehensive Fire and Number 2 for Fire

Number 2 for no fire

Test : Aider

**Results:**

epochs: 200, lr = 0.001, batch = 16

problem 1:

Graphical user interface, application

Description automatically generated

Graphical user interface, application

Description automatically generated

epochs: 400, lr = 0.001, batch = 64

Graphical user interface

Description automatically generatedProblem 2:

Graphical user interface, application

Description automatically generatedepochs: 800, lr = 0.001, batch = 128

Graphical user interface, application

Description automatically generated

Σκέψη διαχωρισμού φωτιάς - καπνού

more than 800 epochs > overlearning

**Models:**



**2 classes: Flood / ( general negatives)**

**- datasets:**

Train: Aider Floods and Comprehensive flood

Number 2 – as negatives (not disaster)

Test : Number 3 and random pictures

A car driving through a flooded road

Description automatically generated with low confidence**Results:**

epochs: 350, lr = 0.001, batch = 32

Graphical user interface, application

Description automatically generated

Graphical user interface

Description automatically generated with medium confidenceGraphical user interface, application

Description automatically generated=> πιθανό πρόβλημα η εικόνα μιας θάλασσας σκούρα -> ωστόσο όπως φαίνεται πιο κάτω όλα καλά

**Models:**



**3 classes: Fire/ Flood / ( general negatives)**

**- datasets:**

Train: Aider Floods and Comprehensive flood

Comprehensive Fire and Number 2 for Fire

Number 2 – as negatives (not disaster)

Test : Number 3 and random pictures

**Results:**

**Graphical user interface, application

Description automatically generatedepochs: 550, lr = 0.001, batch = 32**

Graphical user interface, application

Description automatically generated

Πρόβλημα, θα έπρεπε να το βρίσκει ως πλημμύρα

Graphical user interface, application

Description automatically generated

**epochs: 800, lr = 0.001, batch = 32**

Καλύτερο, αλλά μπορούμε να πάρουμε καλύτερο accurancy

Graphical user interface, application

Description automatically generatedGraphical user interface, application

Description automatically generatedepochs: 850, lr = 0.001, batch = 64

A picture containing text, nature, screenshot

Description automatically generated

**Models:**



**3 classes: Fire/ Post Fire/General/**

**- datasets:**

Train: Aider Floods and Comprehensive flood

Comprehensive Fire and Number 2 for Fire

Number 2 – as negatives (not disaster)

Post – Fire – armenoxori

Test : Number 3 and random pictures and paphos post fire

**Results:**

**epochs: 600, lr = 0.001, batch = 16**

Graphical user interface, application

Description automatically generatedGraphical user interface, application

Description automatically generatedGraphical user interface, application

Description automatically generated

**Models:**

[fire - post fire - general](fire%20-%20post%20fire%20-%20general)

**4 classes: Fire/ Post Fire/General/Flood**

**- datasets:**

Train: Aider Floods and Comprehensive flood

Comprehensive Fire and Number 2 for Fire

Number 2 – as negatives (not disaster)

Post – Fire – armenoxori

Graphical user interface, application

Description automatically generatedTest : random pictures

**epochs: 800, lr = 0.001, batch = 16**

=> θα αυξήσω λίγο τις εποχές για 100%

[fire - postfire - general - flood](fire%20-%20postfire%20-%20general%20-%20flood)

Graphical user interface, application

Description automatically generatedGraphical user interface, application

Description automatically generated**2 classes: Building Disaster / General**

**datasets:**

Train: Aider Building Disaster

Number 2 – as negatives (not disaster)

Test : Number 3 and random pictures

**epochs: 700, lr = 0.001, batch = 16**

[building disaster = general](building%20disaster%20=%20general)

**5 classes: Fire/ Post Fire/General/Flood/Building Disaster**

Graphical user interface, application

Description automatically generatedepochs = 800

batchsize = 16

Graphical user interface, application

Description automatically generatedGraphical user interface, application

Description automatically generated

Graphical user interface

Description automatically generated with medium confidenceGraphical user interface, application

Description automatically generated

**Models:**

[fire- postfire-general - flood - building](fire-%20postfire-general%20-%20flood%20-%20building)

|  |
| --- |
| Combinations |
| Fire - General |
| Flood - General |
| Fire / Flood / General |
| Fire / Post Fire /General |
| Fire / Post Fire /General / Flood |
| Building Disaster / general |
| Fire / Post Fire /General / Flood / building disaster |
|  |