OnFire Contest

Members:

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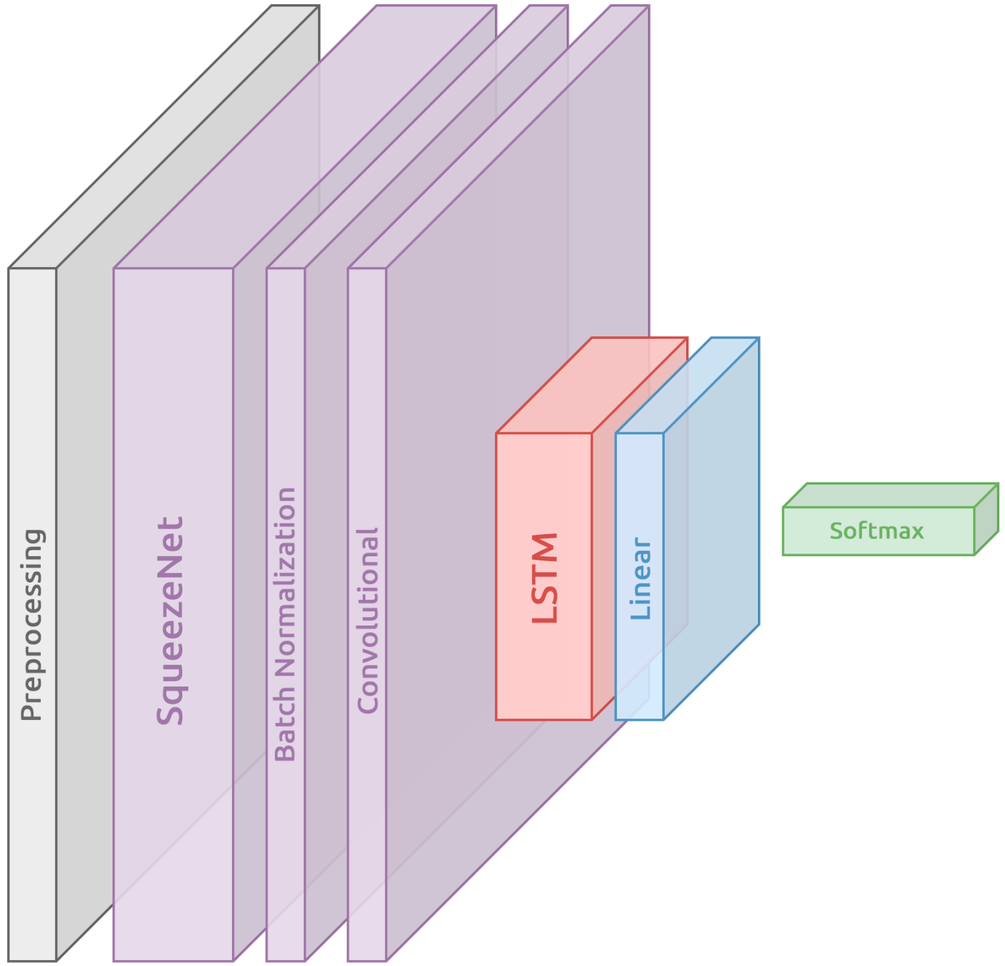
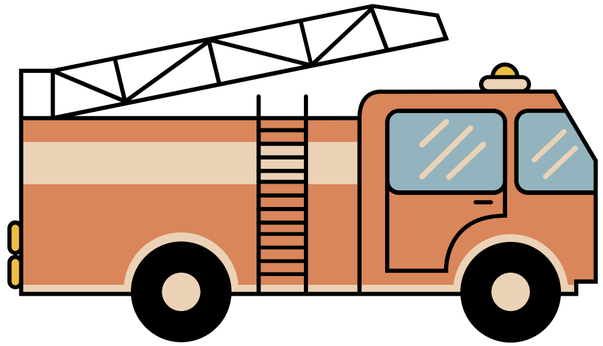
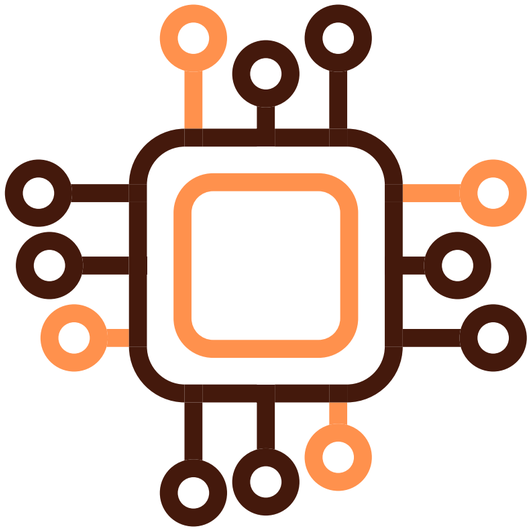

Preprocessing
SqueezeNet
Batch Normalization
Convolutional
LSTM
Linear
Softmax



Real Time Fire Detection

Processing Framerate



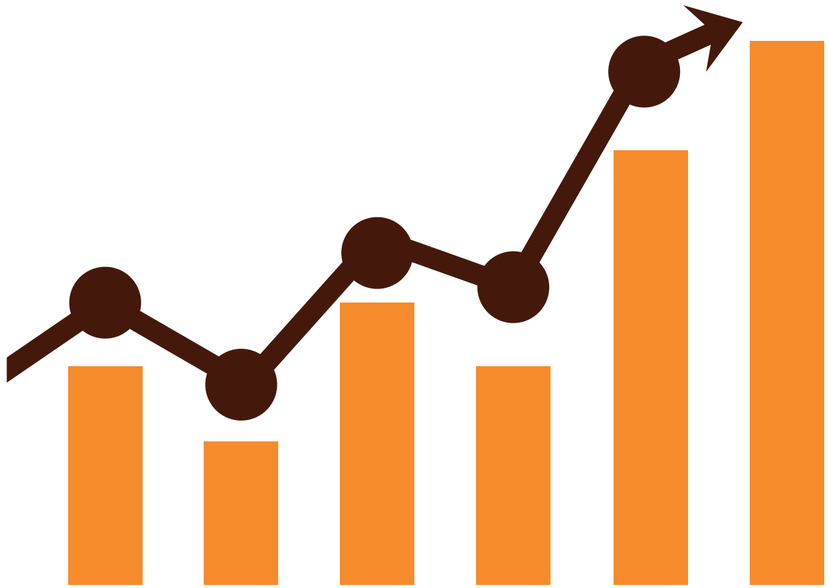
Lightweight

Fire detection accuracy

Memory Usage

Precision

Recall

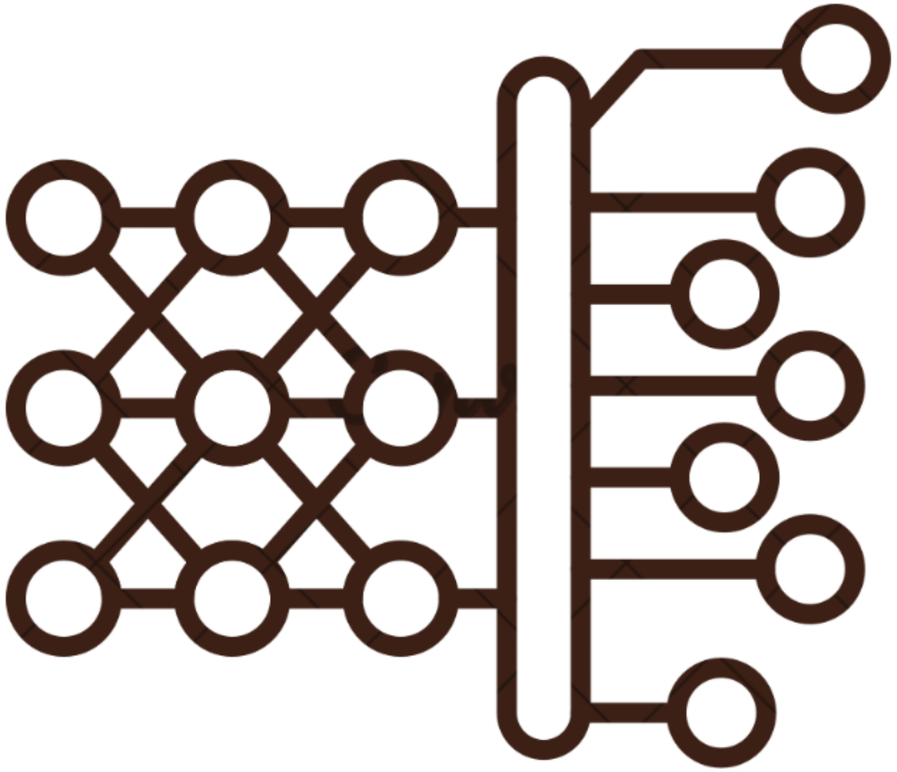


Normalized processing framerate

Normalized memory usage framerate

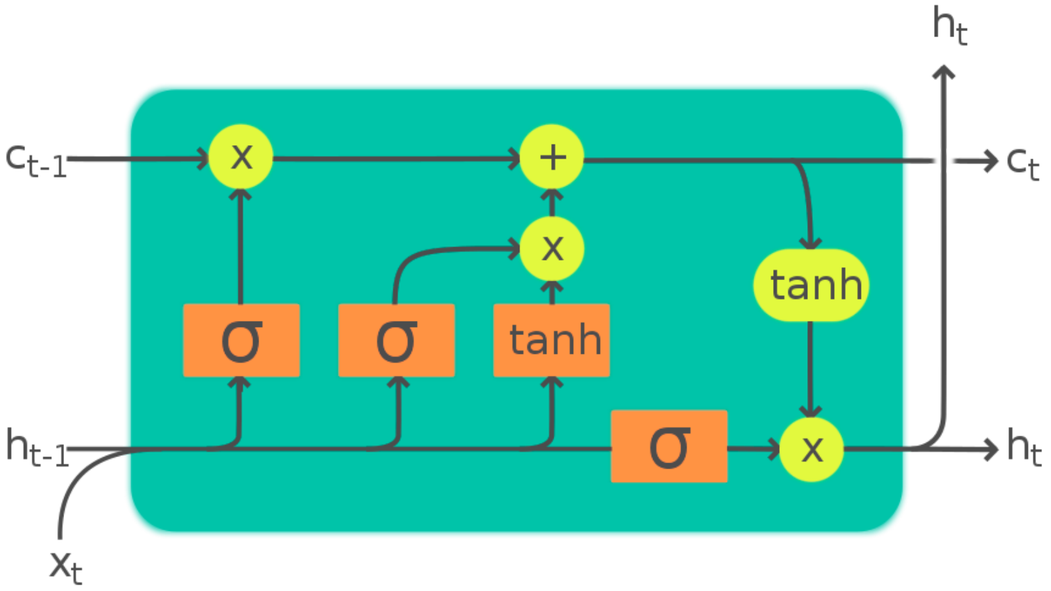
Normalized Average notification delay

Fire detection score



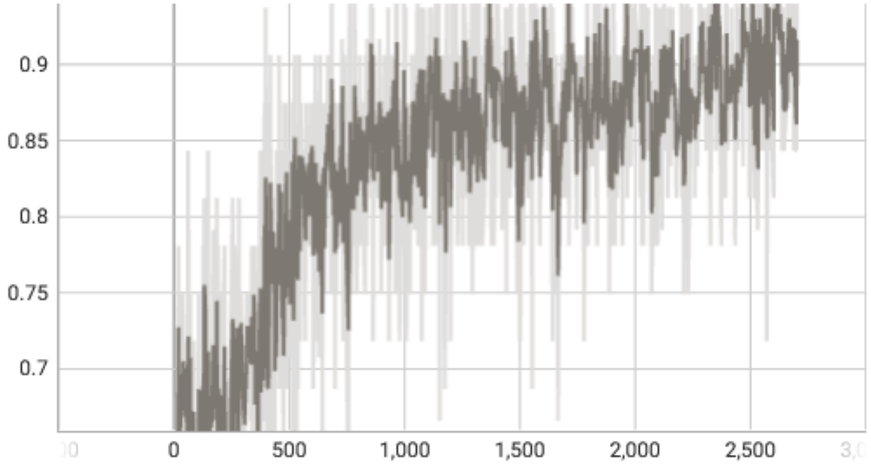
SqueezeNet

(with the last 2 layers modified)

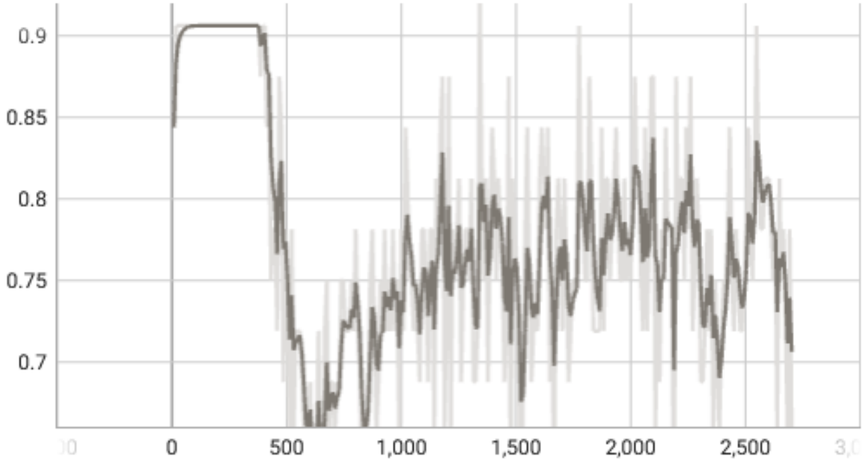


LSTM

Example fold

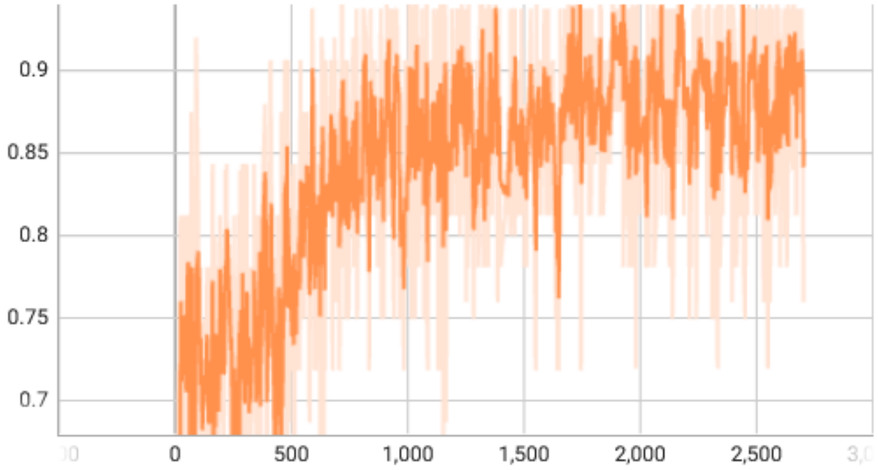


training accuracy

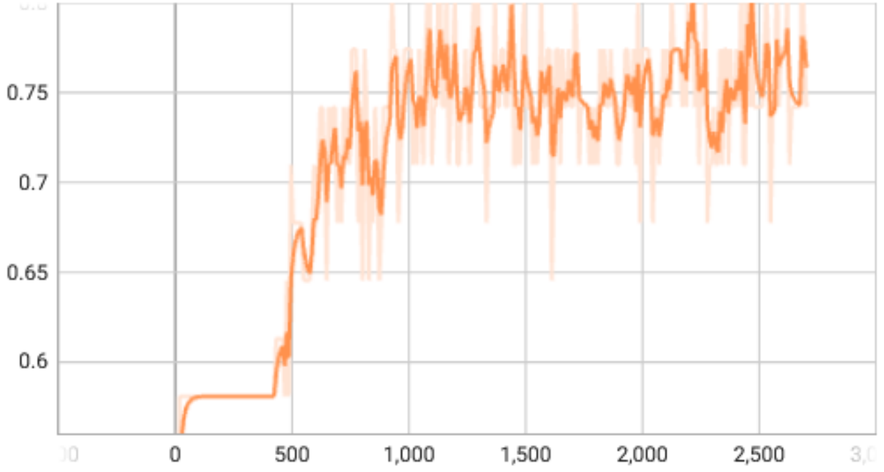


validation accuracy

Selected fold

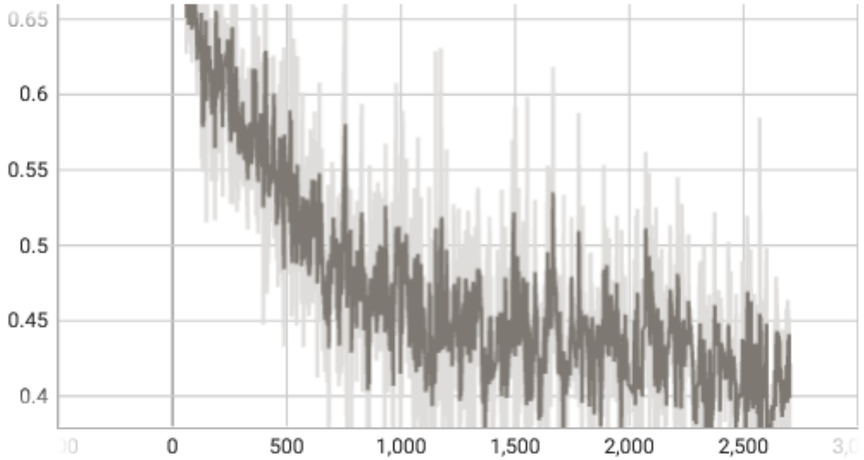


training accuracy

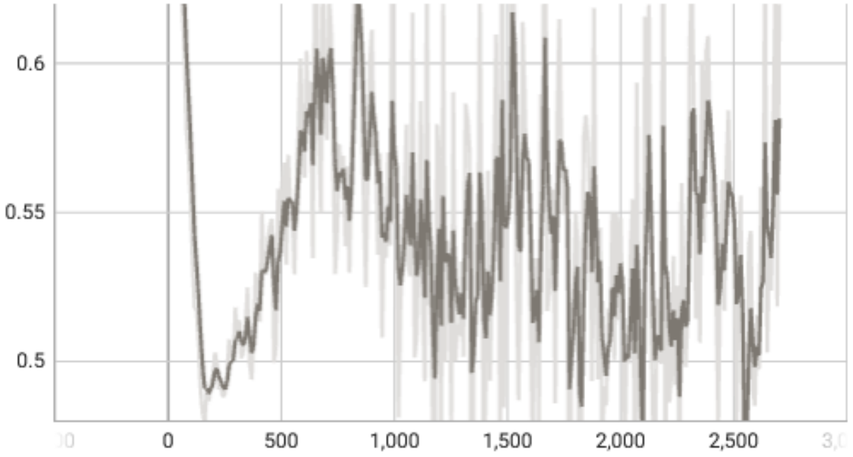


validation accuracy

Example fold

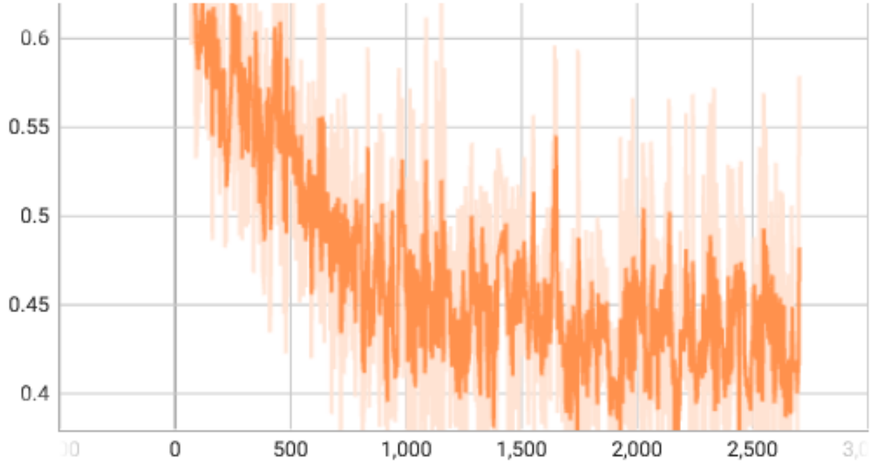


training loss

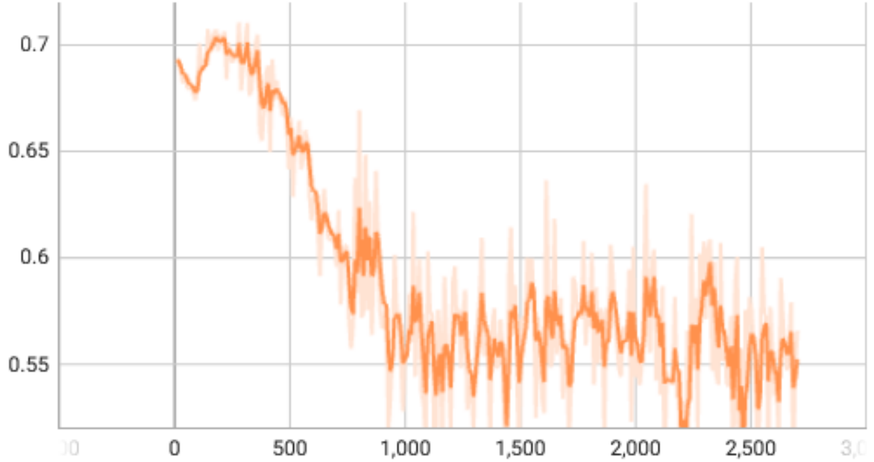


validation loss

Selected fold



training loss



validation loss

- From the **selected fold**, we can notice that the **accuracy** values **steadily increase** during the **training** process; this behavior is also observable during the **validation** phase
- In the **selected fold**, the **loss function** values converge gradually towards a certain value, **without significant oscillations**; that indicates the network's robustness

- Furthermore, during the **testing** phase, the **selected fold** proved to be one of the **best** in recognizing **positive samples** and the best in terms of **false positives**

Example fold
Positives: 14 / 15
False positives: 18 / 28

Selected fold
Positives: 15 / 15
False positives: 8 / 28

Thank you!