TEORETICKA CAST

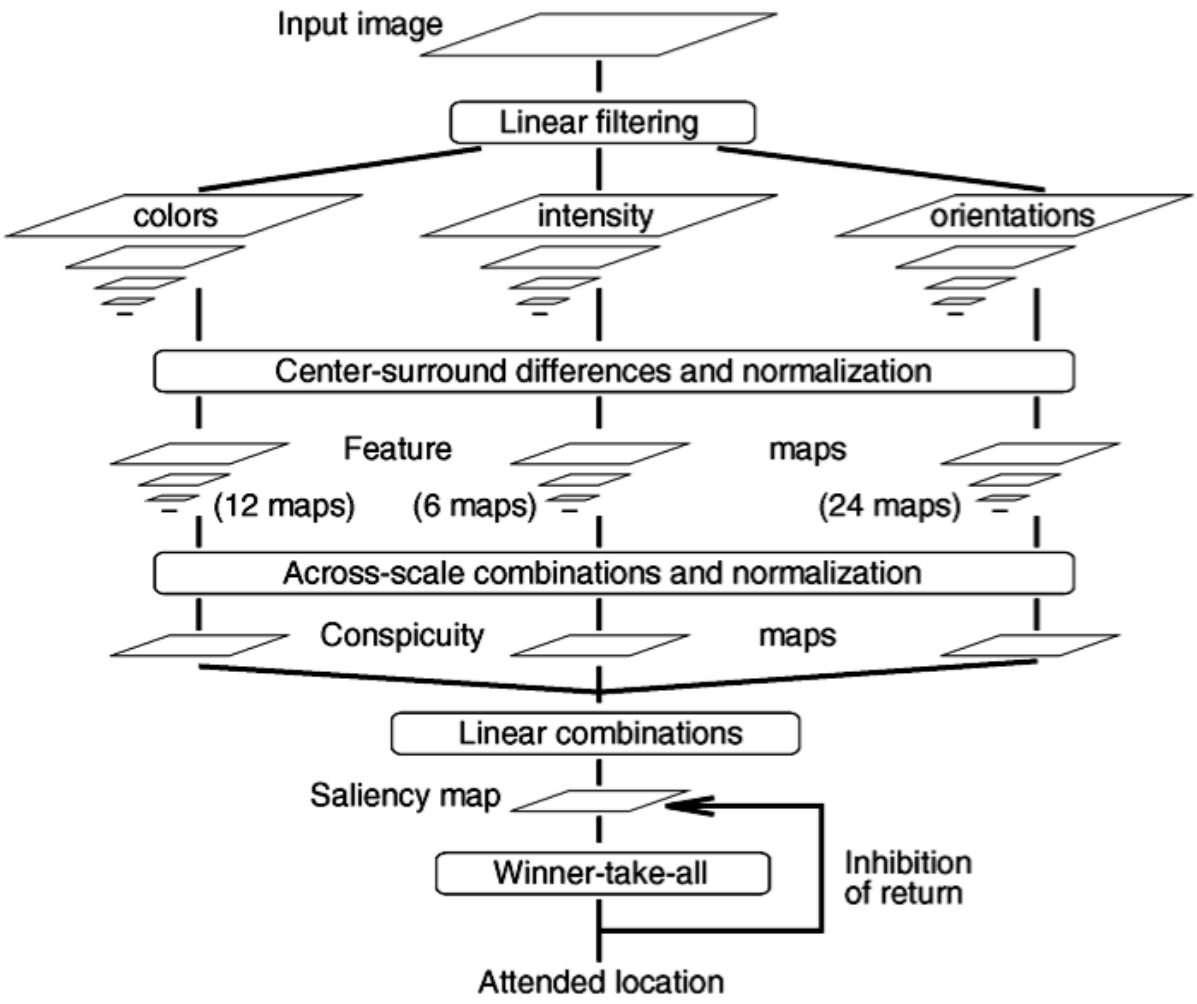


Figure 1: Itti model

Zdroj:https://www.researchgate.net/publication/282161427_Bottom_up_approach_for_modelling_visual_attention_using_saliency_map_in_machine_vision_a_computational_cognititve_neuroscience_approach

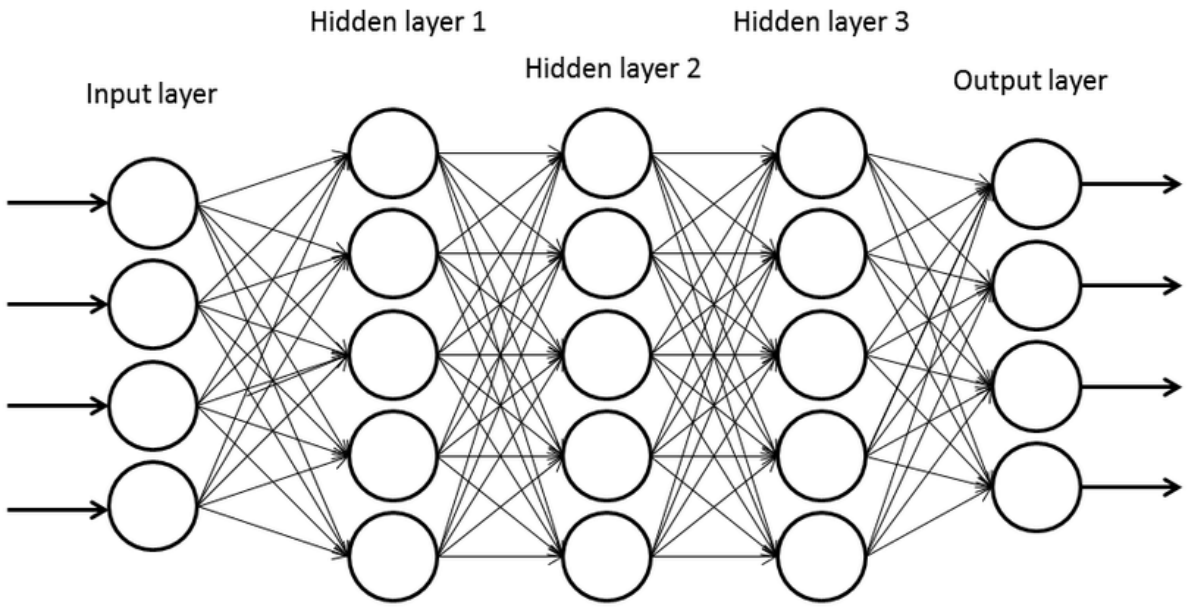


Figure 2: Neuronove siete

Zdroj:https://www.researchgate.net/publication/311966233_A_methodology_based_on_Deep_Learning_for_advert_value_calculation_in_CPM_CPC_and_CPA_networks

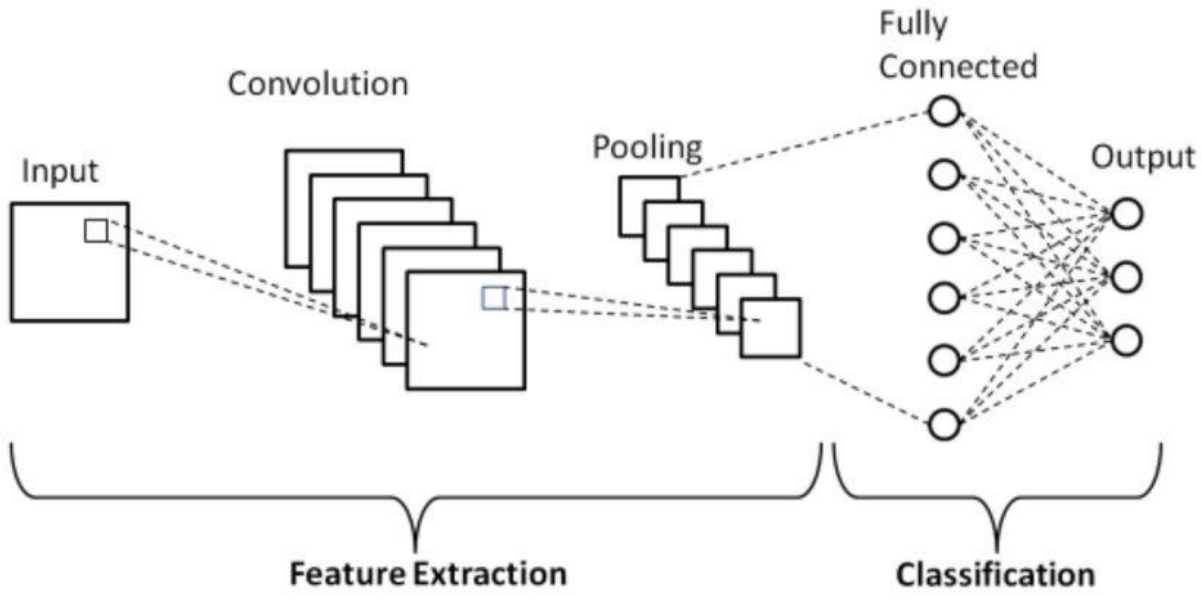
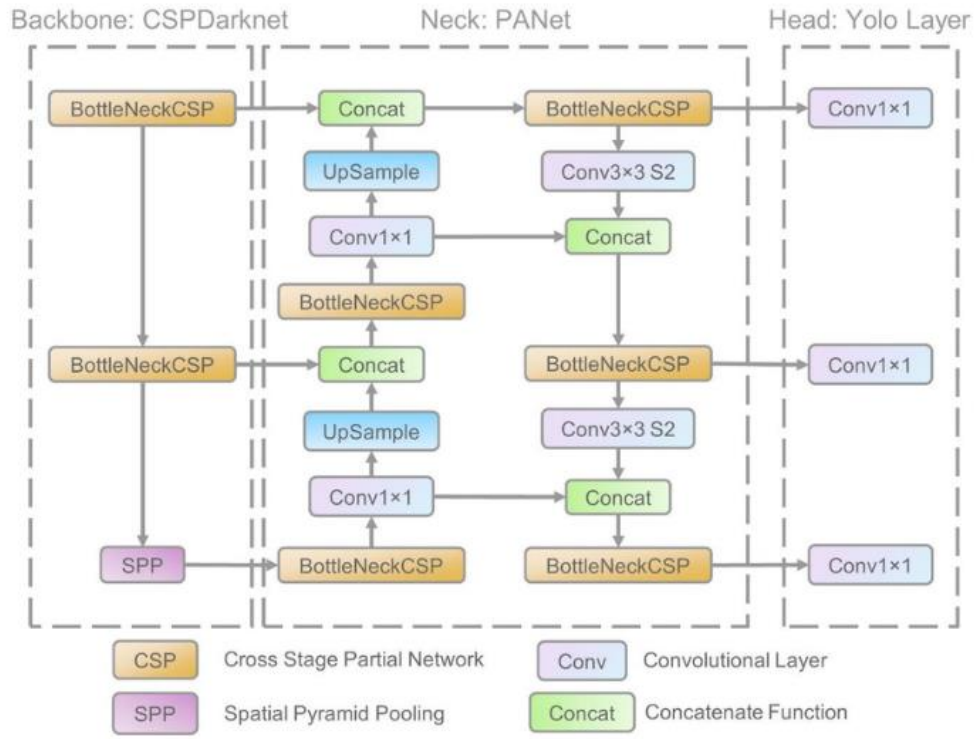


Figure 3: konvolucne neuronove siete

Zdroj:https://www.researchgate.net/publication/347920378_Dimensionality_Reduction_for_Human_Activity_Recognition_Using_Google_Colab

PRAKTICKA CAST

- Dataset: 1150 training, 300 validation, 150 test images (total: 1500)
- Object detection pomocou YOLOv5 (PyTorch)



The network architecture of Yolov5. It consists of three parts: (1) Backbone: CSPDarknet, (2) Neck: PANet, and (3) Head: Yolo Layer. The data are first input to CSPDarknet for feature extraction, and then fed to PANet for feature fusion. Finally, Yolo Layer outputs detection results (class, score, location, size).

Figure 4: Yolo object detection, modelova architektura

Zdroj:https://www.researchgate.net/figure/The-network-architecture-of-Yolov5-It-consists-of-three-parts-1-Backbone-CSPDarknet_fig1_349299852

- *Activation Function*
  - Leaky ReLU
- *Cost Function*
  - Binary cross entropy

Spolu: 191 vrstiev a niekolko milionov parametrov

Zhrnutie modelu: https://github.com/ultralytics/yolov5/issues/6998

Hyperparametre: https://github.com/ultralytics/yolov5/issues/607