Seminar: Vision Systems MA-INF 4208

Introduction

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Prof. Sven Behnke
Hafez Farazi

farazi@ais.uni-bonn.de
http://ais.uni-bonn.de/

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In this seminar,

We will discuss topics ranging from biologically inspired to modern technical vision systems.

The main goal is to form your own scientific opinion and develop critical thinking skills. We don't want a copy of the paper!

Important dates:

- (15 Sep) Draft submission
- (30 Sep - 10:00 AM) Final presentation
- (05 Oct) Deadline for report

Webpage: http://ais.uni-bonn.de/SS20/SemVision/
username: semvision
password: visionsemss20

In this seminar,

1. 45 Min talk (15 min discussion and 30 min presentation) with presentation and discussion.
2. Use the LaTeX template. The main idea is to practice a small thesis.
3. Your report should have 8-10 pages. Try to be brief but readable and informative. You should form your own scientific opinion and develop critical thinking skills.
    a. What are the weak points of the paper?
    b. Which critical points are missing from the paper?
    c. Are comparisons and results fair? Did they tune other models well enough?
    d. What are the possible next steps?
    e. Are their assumptions well justified?
4. Write an abstract that summarizes everything you wrote. Use a spell checker and/or let somebody else read your report before submitting it.
5. Make sure to cite correctly. Ensure you do not copy from anywhere without citing the source when you refer codes from open source community.
6. Write a nice, readable introduction, describe which methods authors have used, including some maths, put their results in a table, include a figure (both with caption), reference table, and figure in your text when you discuss the results. Write a conclusion.

If you have any questions, please don't hesitate to contact me.

Arrange a date with me two weeks before the presentation time to show me your preliminary materials for presentation and report.

In this seminar,

Available topics:

1. Image recognition and object detection:
   a. CornerNet: Detecting Objects as Paired Keypoints (2019)
   b. DensePose: Dense Human Pose Estimation In The Wild (2018)
2. Generative models:
   a. Image-to-Image Translation with Conditional Adversarial Networks (2017)
   b. Video Generation from Single Semantic Label Map (2019)
3. Video prediction:
   a. Compositional Video Prediction (2019)
   b. Disentangling Propagation and Generation for Video Prediction (2019)
4. Analyse methods:
   a. Deep Double Descent: Where Bigger Models and More Data Hurt (2019)
   b. ImageNet-trained CNNs are biased towards texture (2019)

Select one of them until 27 July:
https://doodle.com/poll/ehv99h4zkashpfef

Please don't forget to register in BASIS.

In this seminar,

Grading

- 25%: Quality of the slides
- 25%: Presentation skills and ability to answer questions
- 25%: Mastering the concept
- 25%: Report (8-10 pages, technical report format)