Masterarbeit

Zero-Shot Learning for Object Detection

Description

Are you passionate about cutting-edge artificial intelligence research? This master's thesis opportunity is perfect for you! Under the theme "Zero-Shot Learning for Object Detection," you will explore advanced techniques that enable the identification of objects without prior training data for specific classes. This exciting and evolving research area presents both theoretical and practical challenges.

The thesis aims to review existing approaches, develop a novel model, and deliver impactful insights. You will have the chance to work with machine learning frameworks and utilize technologies from computer vision and natural language processing.

Objectives:

1. Review Existing Literature: Explore into the fascinating world of zero-shot learning and object detection. Explore the latest research papers, articles, and studies to build a strong foundation for your thesis.

2. Develop a New Model: Unleash your creativity and technical skills to design and develop a novel model for zero-shot object detection. Your innovative approach could pave the way for future advancements in the field.

3. Evaluate the Model's Performance: Put your model to the test! Evaluate its performance on benchmark datasets to ensure its effectiveness and reliability. This step is crucial for validating your research.

4. Analyze Results and Identify Improvements: Take an in-depth look at the results of your experiments. Identify strengths, weaknesses, and potential areas for improvement. Your analytical insights will be invaluable for refining the model.

5. Document the Research Process and Results: Document your research process, findings, and conclusions carefully. Your comprehensive documentation will serve as a valuable resource for future researchers and practitioners.

The work can be done in German or English.

Prior knowledge

- Basic understanding of machine learning, particularly Deep Learning
- Programming skills (Python)
- Strong interest in and enthusiasm for research

Research area

- Machine Learning
- Deep Learning
- Computer Vision & Image Processing

Studiengang

- [x] Elektro- und Informationstechnik
- [x] Informatik
- [x] Mathematik
- [x] Physik

Alignment

- [x] Research
- [x] Implementation
- [x] Analysis and evaluation
- [x] Method development

Start

At any time

Links

Mitarbeiterseite

Ansprechpartner

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