Contrastive Learning for Programming Languages

 Neural Networks have been successful in assisting humans in various contexts. One such context is as a programming aid, where the Neural Network finds suitable code snippets for a given problem. One method of training Neural Networks to do this is by using the so-called "Contrastive Loss". However, previous methods are still fairly simple and have room for improvement.

In this thesis, we will explore how techniques that have proven successful in other research areas, such as Computer Vision, can be transferred to this problem.

Requirements: Strong motivation, knowledge in deep learning, or a solid background in machine learning. Experience with Python and TensorFlow or PyTorch are required and prior knowledge in Computer Vision and Natural Language Processing are an advantage. We will have weekly meetings to address questions, discuss progress and think about future ideas.

Interested? Please contact us for more details!

Contact

- Zhao Meng: zhmeng@ethz.ch, ETZ G61.3