# Seminar in AI: CLOOB: Modern Hopfield Networks with InfoLOOB Outperform CLIP

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# 1 Introduction text Fürst et al. (2022)

#### 1.1 Motivation

text Radford et al. (2021)

#### 1.2 Background

text

## 1.2.1 Contrastive learning

text

#### 1.2.2 CLIP

text

# 2 Body

text

# 3 Theory

text

#### 3.1 Headings: second level

text

## 3.1.1 Headings: third level

text

# 4 Theory

text

Preprint. Under review.

# 5 Theory

text

# References

Andreas Fürst, Elisabeth Rumetshofer, Johannes Lehner, Viet Tran, Fei Tang, Hubert Ramsauer, David Kreil, Michael Kopp, Günter Klambauer, Angela Bitto-Nemling, and Sepp Hochreiter. CLOOB: Modern Hopfield Networks with InfoLOOB Outperform CLIP, 2022.

Alec Radford, Jong Wook Kim, Chris Hallacy, Aditya Ramesh, Gabriel Goh, Sandhini Agarwal, Girish Sastry, Amanda Askell, Pamela Mishkin, Jack Clark, Gretchen Krueger, and Ilya Sutskever. Learning Transferable Visual Models From Natural Language Supervision, 2021.