Shikhar Vashishth*[1,2], Soumya Sanyal*[1], Vikram Nitin[3], Nilesh Agarwal[1], and Partha Talukdar[1]

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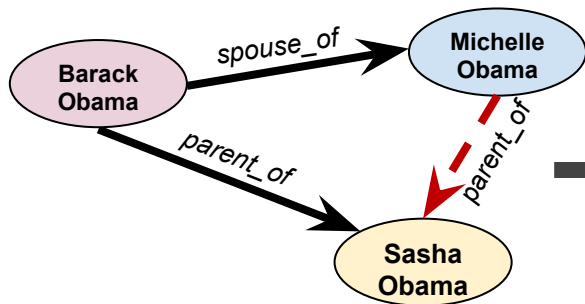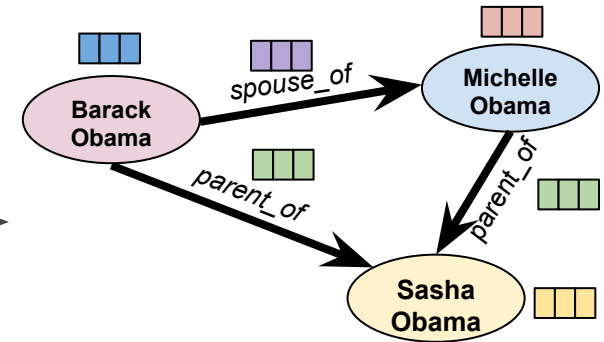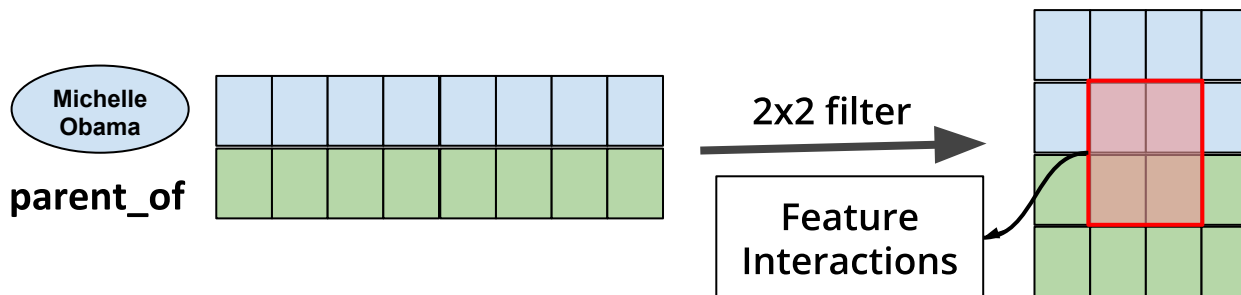
- ## Link Prediction in Knowledge Graph

Knowledge Graph Embedding

Knowledge Graph

Inferring missing links in KG

- ## Capturing feature interactions is helpful for Link Prediction

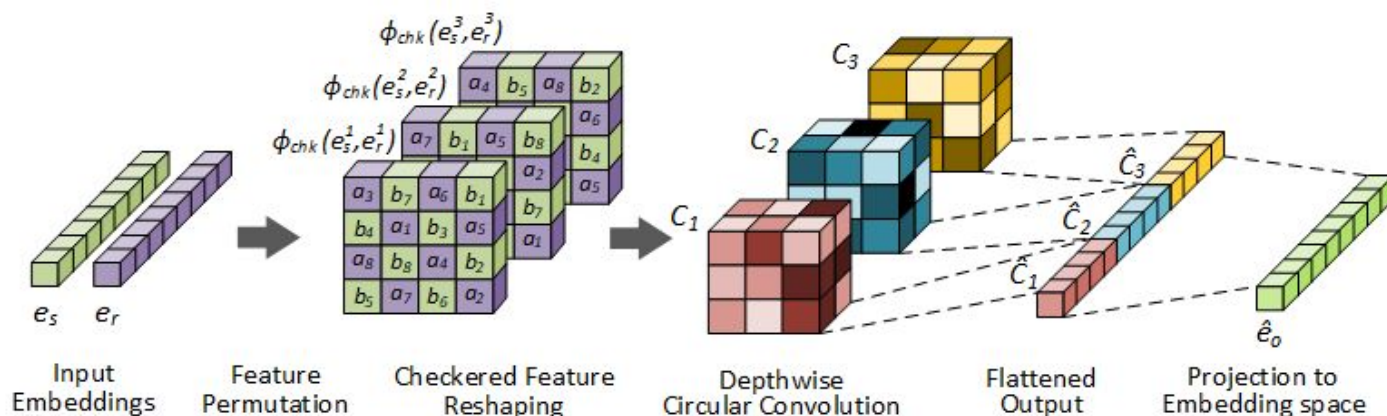Michelle Obama

parent_of

2x2 filter

Feature Interactions

ConvE (2D-Convolution)

But the feature interactions captured in ConvE are **limited**!

Does increasing feature interactions improve Link Prediction performance?

InteractE: Increasing Feature Interactions in KG Embeddings

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InteractE Overview

Poster #114 - KRR8986

Input Embeddings → Feature Permutation → Checkered Feature Reshaping → Depthwise Circular Convolution → Flattened Output → Projection to Embedding space

Key attributes

- Feature interaction **permutation**

- **Checkered** feature reshaping

- **Circular** convolution

- **13%** higher MRR than ConvE on average

Increasing feature interactions