Algorithm Selection for Legalization Using CNNs
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Introduction

Data input
- Clock data
- Layout data
- Routing data
- Timing data

Prediction
- CTS
- Result
- Signoff
- Timing
- Routing Violations

ML models

Target application

We use ML to select the best legalizer for a placement

Lack of works using ML in legalization

Data generation

We use circuit snapshots to train CNN

Confusion matrix

Predicted

<table>
<thead>
<tr>
<th></th>
<th>HAO</th>
<th>ZIR</th>
<th>ODP</th>
</tr>
</thead>
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</tbody>
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Real

Experimental results

ML reduced displacement with almost 6x speedup