

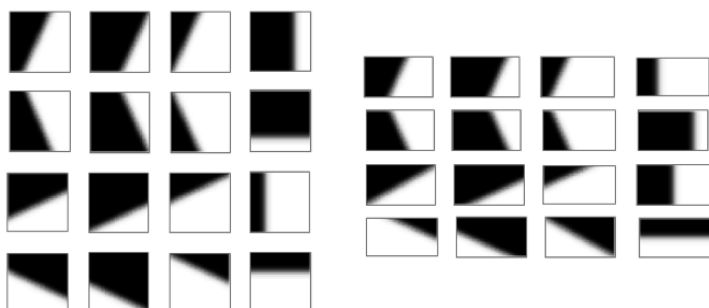
# Graph-based transformation for non-rectangular signal

**Priyanka Das**  
Research Scientist

[priyanka.das@lfb.rwth-aachen.de](mailto:priyanka.das@lfb.rwth-aachen.de)

## Background

Transformation is an important part for achieving compression in video coding. Traditional transformation technique includes DCT (Discrete Cosine Transformation) and DST (Discrete Sine Transformation). They all work on rectangular blocks. There is a scope in new codecs to transform non-rectangular signals. The following are non-rectangular modes available in AV1 (a modern codec). Graph-based signal transformation techniques have offered benefit in recent years. The goal of this thesis is to investigate ways to construct a graph-based transformation technique to transform the following non-rectangular signal shapes and available block sizes.



## Requirements

- Understanding and interest in signal processing
- Background knowledge on video coding would be very helpful
- Experience in Matlab or python

If you are interested please send me an email.