**Summary of the Paper**

**Deep Residual Learning for Image Recognition**

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## Content

To begin there will be a short summary for the chapters in the paper. The following contents will be short introduction to deep convolutional networks, a mention of the related work used for the paper, a short introduction to residual learning, the used architecture and implementation and performance experiments on ImageNet 2012 and CIFAR-10.

### Introduction

The Paper starts with

### Related Work

### Deep Residual Learning

### Expirements

#### ImageNet 2012

#### CIFAR-10

## Comprehensibility

## Ease of Implementation

As a part of our assignment we implemented ResNet20 and ResNet32 from this paper and compared our results to the one in this paper.

### Implementation

At first implementing the stated ResNets was more complicated than we assumed. Especially because ResNet20 and ResNet32 are used for the CIFAR-10 Image-Set which uses a slightly different approach, then the residual nets described the main implementation part of the paper. It took a bit to figure out, which block-types were used, and which components were obsolete in the new residual nets. But once the first residual was finished and achieved almost the same results as the residual nets stated in the paper, it was to quite easy to add a different residual net.

A different problem was the runtime. In the paper 64 \*10^4 Iterations were performed. Even though we had quite a fast

### Success of Implementation

## Comparision to Pytorch Implementation