

On the Exploration of Referenced-Based Super Resolution for Face Images

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Project Motivation

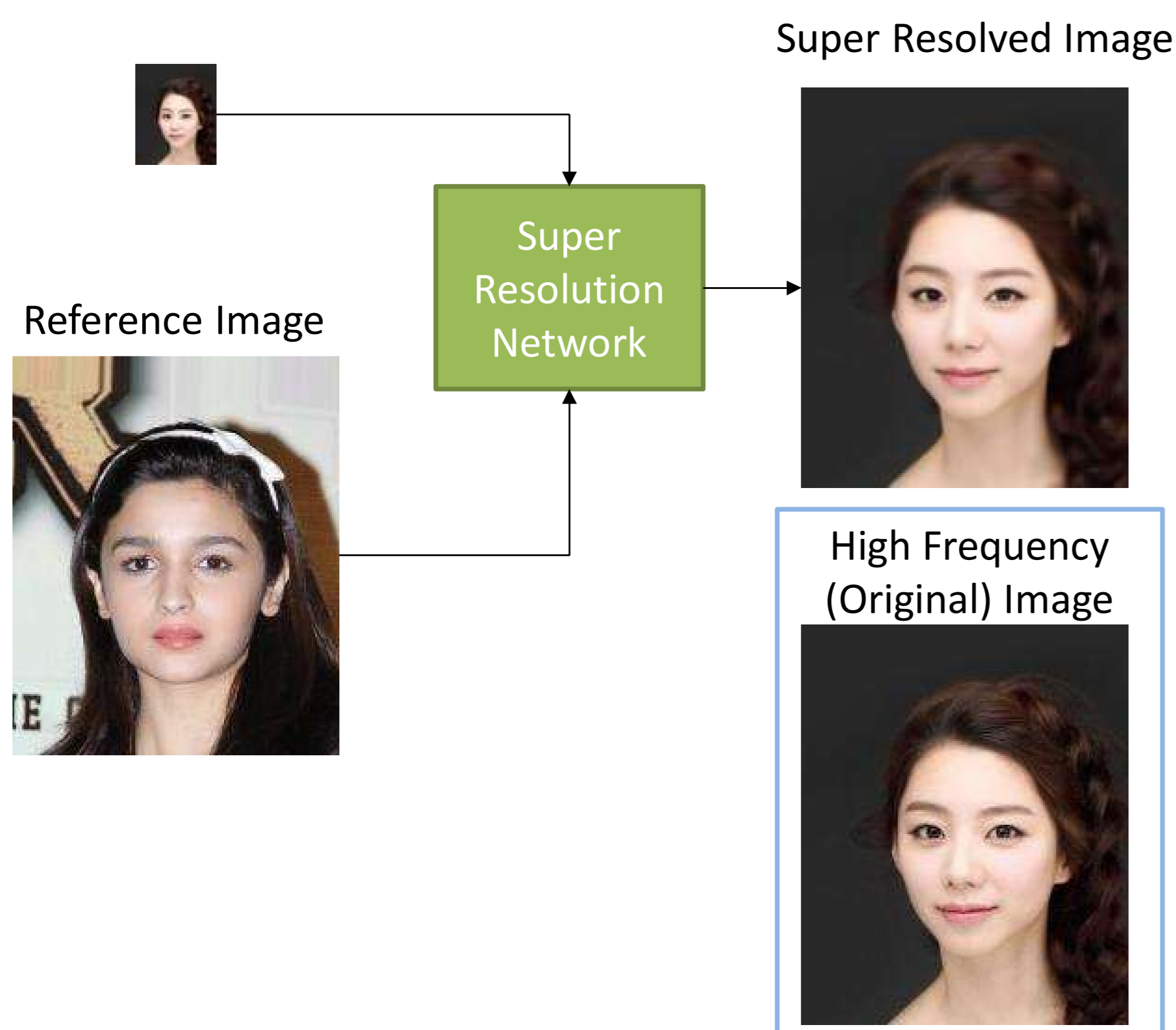
Over the years, there is an increasing needs for high-resolution images for the following fields: Medical, Astronomy and Social Media today. Many people have been trying various methods to recover high-frequency image details from lower resolution images. This process is known as Image Super Resolution. Due to real-world limitations in collecting high-frequency image data in these domains, many researchers begin to explore this area for real-world problems.

Project Objective

In this project, we will explore and study the modern techniques used in the Referenced-Based Super Resolution for Face images. Referenced-Based Super Resolution is a specific domain where an additional/reference information (i.e High-Frequency image) is used to perform the original Image Super Resolution.

Reference-Based Image Super Resolution

Low Frequency Image



The Super Resolved (SR) Image is obtained by passing the Low Frequency and Reference Image into a Super Resolution Network. I have also included the Original Image in the blue box to observe the performance between SR Image and Original High Frequency Image.