

# Overview

- **Music Source Separation (MSS)**

- Introductions & Related works
- Motivation1: MSS empirical upper bounds
- Motivation2: Channel-wise subband feature
- Proposed model: Channel-wise subband phase-aware ResUNet (CWS-PResUNet)

- **Speech Enhancement (SE) topics.**

- **General Speech Quality Restoration (GSR)**

- Introductions & Related works
- Motivation1: Single task speech restoration & weaknesses
- Motivation2: Universal Speech Vocoder
- Proposed model: VoiceFixer

# Introductions

## Speech Quality Restoration

- This project start from speech super resolution.
  - Generalization problem.
    - Bandwidth, filter type, filter order, ...
  - Application problem.