

Comparison of musical elements of J-POP and VOCALOID music

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Background



What is VOCALOID?

- Voice synthesis software for electric music production
- Online subculture community since 2007



What is J-POP?

- All Japanese pop music other than Enka



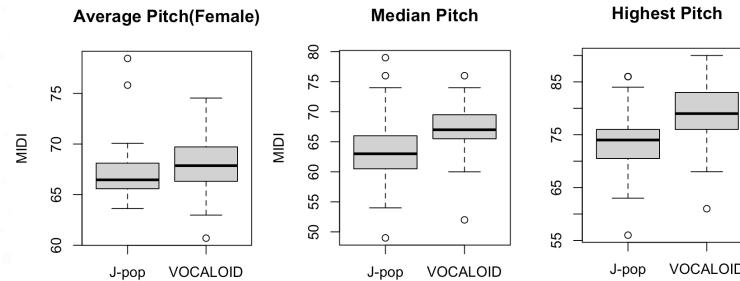
- Popular, but often overlooked
- Platform from amateur to musician
- No research before



Do VOCALOID singers sing higher?

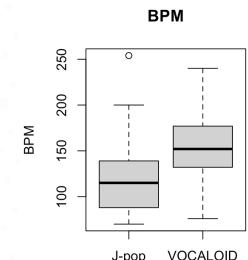
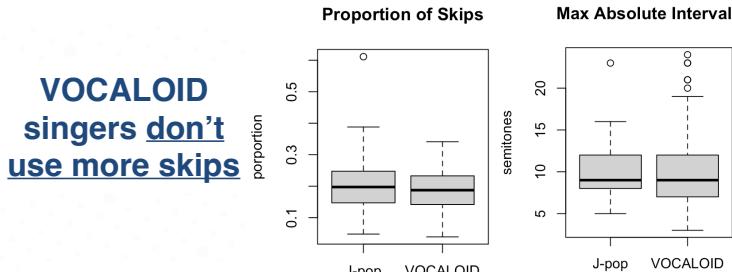
Do they use more skips?

Do they sing faster?



VOCALOID singers sing higher than J-POP

VOCALOID singers don't use more skips



VOCALOID singers sing much faster than J-POP

Reference:

Weekly VOCAL Character Ranking

Apple Music

Resource:

Covers (by Synthesizer V or UTAU)

Musescore

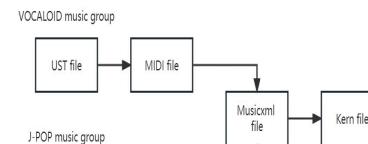


Data Collection



Data Cleaning:

- Pitch information
- Key information
- Note duration
- Organize melody



Analysis

Pitch Comparison— average pitch (weighted by duration), median pitch, highest pitch

Interval Comparison— max interval, average interval

Speed Comparison— BPM, density of notes

Methodology



Georgia Tech

Computational & Cognitive Musicology Lab