

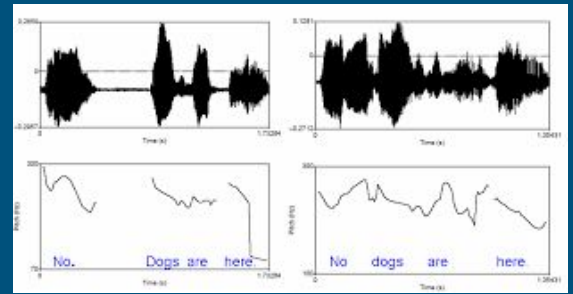


# Team LingoPros: Prosodic Labeling Tool

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Steinmacher

# Applied Linguistics Speech Lab



- Want to have speech recognition that recognizes prosody
  - Features of the speaker or of the utterance (sarcasm, emphasis, question, etc.)
  - Most only recognize words and not prosody
- The ALSL developed a model, but they want to compare it to one in a different framework
  - David Brazil vs. ToBI
- The program listens to the audio file and analyzes it
  - Current method takes hours or more to analyze

# Dr. Okim Kang and Dr. David Johnson

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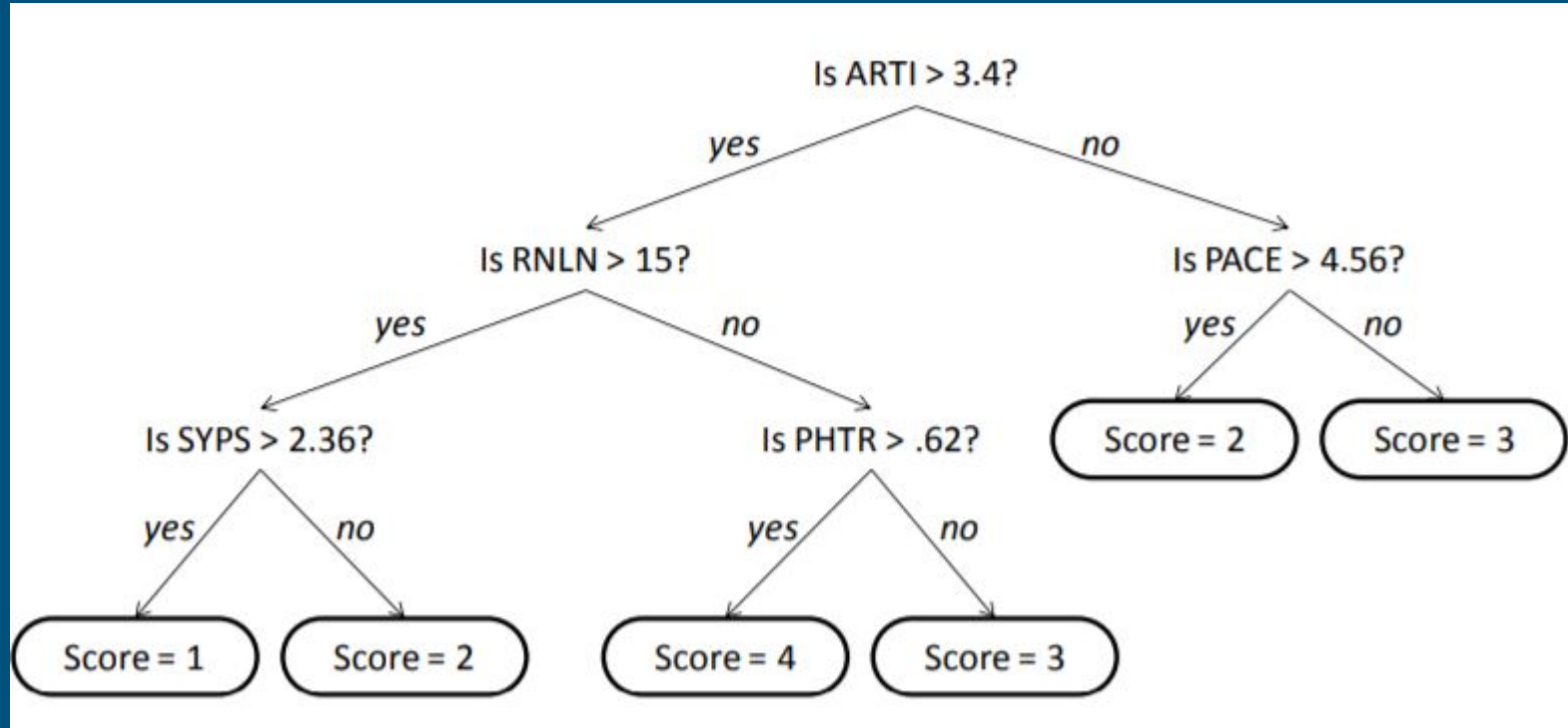
Dr. Kang:

Director of the Applied Linguistics Speech Lab  
Ph.D in Linguistics

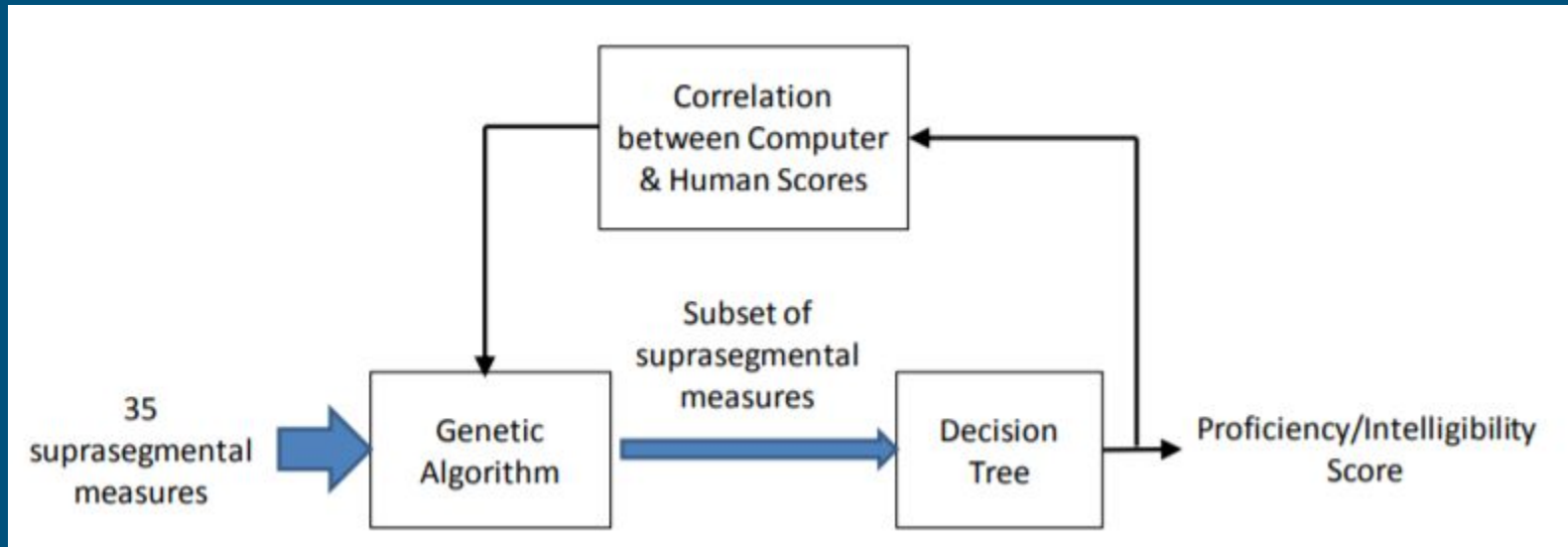
Dr. Johnson:

Postdoctoral Computer Engineer currently at the University of Kansas.  
Working with us remotely on the project.

# Example Test with 5 measurements



# Model for the System



# Prosodic Labeler

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## ToBI model - Developed by MIT

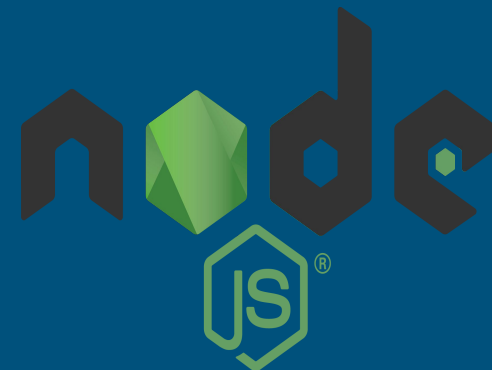
- Use framework to identify basic prosody elements
  - Java and MATLAB
- Work with Dr. Kang to code these elements into usable measurements
  - Different levels of pitch, amounts of pauses, etc.
  - Weekly Meetings
- Use existing machine learning software to utilize the measurements developed in the ToBI framework

# Web Interface

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## Online Web App

- Will improve the speed of analysis
  - Current system split between Windows and Linux
  - Use a runtime environment for the site
  - Upload Audio Files
- Features:
  - User accounts
  - Displays proficiency / intelligibility as well as what measurements were used



# Wrapping Up

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- LingoPros
- Dr. Okim Kang
  - ALSL
  - Help us with the Linguistic aspects
- Want to compare their framework with a more popular one
  - ToBI
- Develop program using ToBI
  - Identify prosody and convert them to measurements
- Web App for quick analysis
  - Login, upload, display