



Speech Tuning: *Practical Tips to Improve Performance*

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Tuning Defined

- Speech tuning is the process of making changes to a speech application post-deployment
- Different than traditional QA
 - Requires data from actual callers, not just internal testers
 - Is a form of analytics for speech applications
- Tuning should be a holistic approach to improving applications

Benefits of Tuning



- Tuning grammars increases recognition accuracy
- Good tuning also increases the overall success rate of an application



Identify Trends

- Tuning requires you identify trends. Be wary of making changes based on one or two incidents
 - Limited time means you should concentrate on big problems first
 - Speech applications are sensitive to minor changes. Accommodating a minority of users can make the experience worse for the majority
 - E.g. lengthening prompts

Types of Misrecognitions

- Unexpected responses
 - Things you don't expect callers to say
- Variations on expected responses
 - “Customer care” instead of “technical support”
 - Alternative pronunciations
- Misrecognized expected responses
 - In-grammar, but Engine misrecognized



Fixing Misrecognitions

- Unexpected Responses
 - Do you want to support this response?
Increasing grammar size can increase misrecognitions.
 - Modify grammar and application
 - Modify prompts



Fixing Misrecognitions

- Variations on expected responses
 - Modify grammars
- Misrecognized expected responses
 - Adjust ASR settings
 - Check hardware
 - Modify grammars, changing similar sounding options

Caller Frustration

- Fix call flow
- Make it clear where the caller is within the application
 - Callers want to feel progress toward goals
- Don't waste a user's time
 - Trim overly verbose prompts
 - Allow for shortcuts

Caller Confusion



- Clarify prompts
 - Good prompts give a user a clear mental model of the application
- Add new options if appropriate
 - Context-sensitive “help” commands
 - Global commands, e.g. “main menu”