

Final Project Update

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Another Project Change...

- CV stuff a bit too much given time
- Switched to task-oriented system implementation ~3 weeks ago
- YATI: Yet Another Twitter Interface!
- Motivation
 - Twitter allows texted tweets for those away from or generally without other web interfaces
 - Why not use voice in a pinch?

Architecture

- Features

- Mixed-initiative
- Baseline system
 - Designed for consumption only
 - Reading tweets from public timeline
 - "Give me the first <n> tweets.", etc.
- Extended system (more personalized consumption)
 - Reading tweets from certain date(s), location(s)
 - Reading tweets with certain keywords
 - Authentication
 - Switching to timelines for individual users
- Very extended (for production!)
 - Posting your own tweets

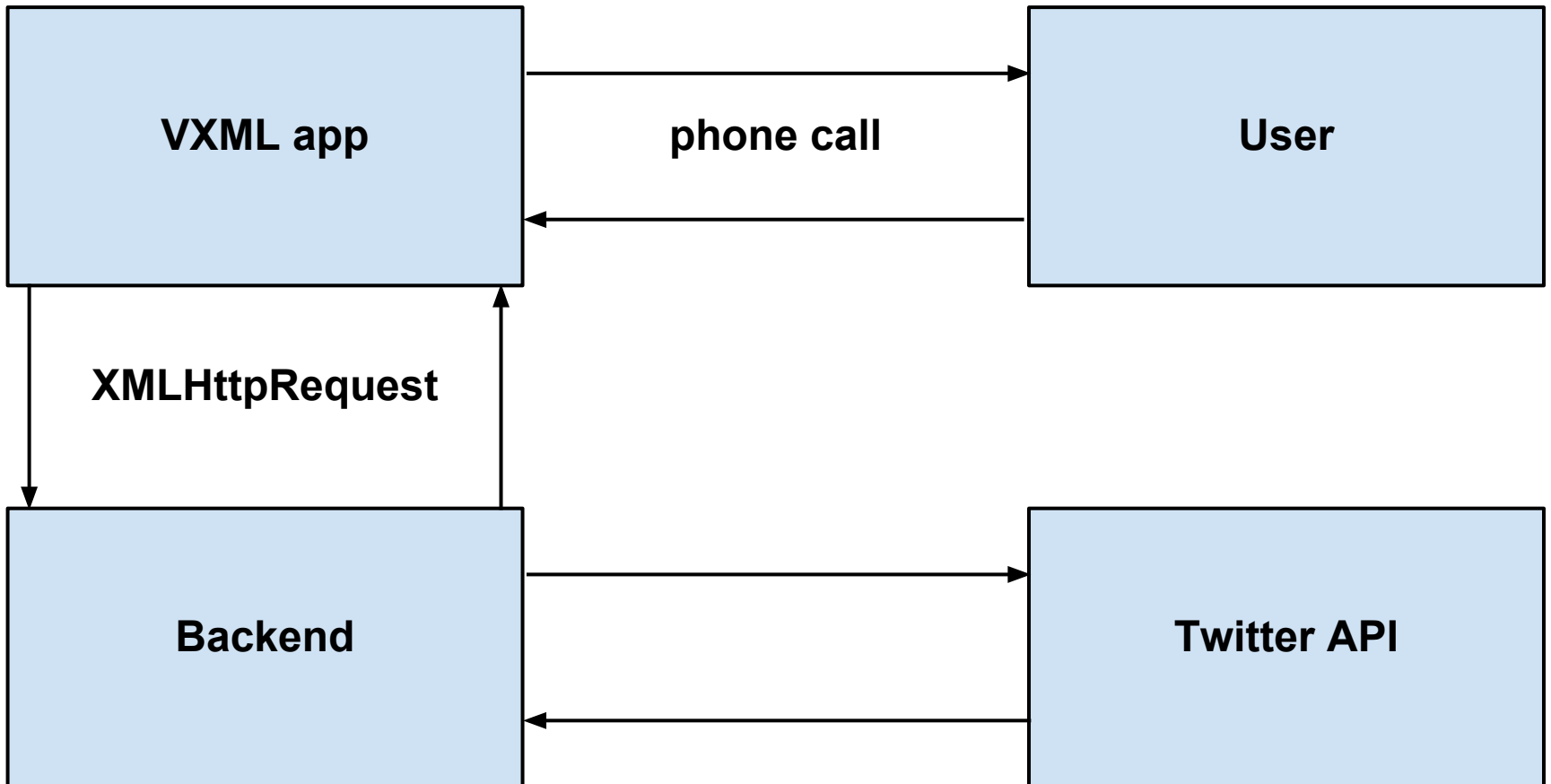
Architecture

- Tools and Resources
 - Voxeo, VoiceXML
 - Custom grammars (GrXML)
 - Naturalistic user commands
 - Usernames?
 - Authentication?
 - Tweeting?
 - Built-in grammars
 - Numbers
 - Date, time
 - Voxeo grammars (GSL)
 - City
 - State

Architecture

- Tools and Resources (cont.)
 - JavaScript
 - XMLHttpRequest
 - Python backend app
 - Twitter API + Python wrapper

Architecture



Challenges

- **Baseline**
 - Relatively simple; limited grammar
 - Biggest challenge: end-to-end connection
- **Extended System**
 - Tweets from specific locations, dates, times
 - Was going to do frame-based
 - Decided against for simplicity
 - Tweets with keywords
 - Uses Twitter's search
 - Open class of search terms or limited set?
 - Single term per search? Multiple?

Challenges

- Extended System (cont.)
 - Authentication
 - Enter username
 - Custom grammar? Limited...
 - Spelling? Capitals...
 - DTMF? Parsing chars from ambiguous number seqs...
 - Enter password
 - Even worse
 - Non-alphanumeric characters
 - Privacy
 - Switching to user timelines
 - Requires authentication
 - User list navigation
 - "Read off my followers starting in the letter 'f'."

Challenges

- Switching to user timelines (cont.)
 - Username recognition
 - Could I do dynamic username grammar building?
 - Grammar might have to be limited, requiring controlled Twitter account conditions.
 - Could use SLM...
- Very extended system
 - Recognizing/transcribing open-ended speech
 - Train SLM, need data
 - Tweet length validation (easy)