1. Task
   1. Any chance you can prepare a 10-minute presentation on Amazon Alexa Skills API, Google Cloud Speech API, Nuance HealthCare Development Platform, and the Amazon Mechanical Turk? brief summary of the computing environments they are working with and brainstorm ideas.
2. Notes
   1. Amazon Alexa Skills API
      1. Alexa
         1. Is female in character
         2. Intelligent personal assistant developed by Amazon
            1. Voice interaction, simple tasks like setting alarms, making notes, and providing real time information.
         3. Alexa is what makes Amazon’s Echo smart.
            1. Though you can build a Raspberry Pi to do the same thing
         4. Only english right now
      2. Alexa Skills kit
         1. Allows people to build 3rd party apps that add to Alexa’s capabilities
            1. All code is run in the cloud, not on the user device
         2. There is work being done with memory networks to answer trivia questions, and work has already been done to answer questions from medical databases.
         3. Graphical Overview
            1. <https://www.netguru.co/hs-fs/hubfs/blog-files/Speech_recognition_and_natural_language_processing_-_Google_Docs.jpg?t=1476445660146&width=588&height=516&name=Speech_recognition_and_natural_language_processing_-_Google_Docs.jpg>
            2. <https://www.netguru.co/blog/voice-recognition-tools-review>
      3. Examples
         1. Skills include Campbell’s app which answers the question that’s on everyone’s mind. “What’s for dinner”?
            1. Get instant results in meal ideas and recipes
         2. Fidelity has an app that lets you look at real time market trends by asking how certain companies are doing.
      4. They’re really pushing to have more people trying to build skills for Alexa.
   2. Google Cloud Speech API
      1. Google cloud Platform is a cloud computing service which developers can have access to for storage, translations APIs and prediction APIs
      2. Uses
         1. NNs help you transcribe dictation
         2. Use it to call and interact with apps
            1. Speech is sent to cloud and the api transcribes that audio
            2. Partial results can be returned while user is speaking
            3. Can combine it with other APIs like vision APIs
      3. Perks
         1. Recognizes over 80 languages and variants
         2. Can handle noisy audio
         3. Works with a variety of tech. Anything that can send a REST or gRPC request
            1. Computers (webpages), tablets, phones etc.
         4. Can tweak their speech recognition a bit by giving a custom vocab
      4. I’m not completely sure that developers have access to the speech recognition API directly
         1. Google loud Natural Language API as well
   3. Nuance HealthCare Development Platform
      1. Nuance powers SIRI and Samsung’s S-Voice
      2. Dragon Medical SpeechKit
         1. Allows healthcare developers to embed voice tech in their apps
         2. Can be used in a multitude of devices
         3. Super easy to integrate
         4. 20 different languages
         5. All tools ensure end-to-end security and HIPAA compliance.
      3. Dictation
         1. Cloud based so dictionary, phrases and clinical formatting rules are updated regularly.
      4. Clinical Language Understanding SDK
         1. Extracts meaningful data from physician narrative and notes. Can be used to populate other information
         2. Relevant clinical data is extracted and tagged
   4. Amazon Mechanical Turk
      1. Crowdsourcing internet marketplace which lets requesters coordinate human intelligence to perform tasks (Human Intelligence Task), which computers cannot.
         1. Jobs can be posted (such as identifying the best picture for a description, identifying individuals in a photo, writing product descriptions, identify the address of this house, or reading text, and turkers take these jobs and do them for a little money.
            1. Average cost for a task is about 4 cents
            2. Tests can be set up to make sure the turker is qualified for the job
            3. Results can be screened to and rejected if unsatisfactory
         2. Very large workforce. So results can be pumped out super fast.
3. Sources
   1. <https://developer.amazon.com/public/solutions/alexa/alexa-voice-service/content/designing-for-the-alexa-voice-service>