Project Factor - User Facing Services (Equation)

Tuesday, January 10, 2017   4:07 PM

Overview

Build a Speech to Text automated system
Project Factor - Presentation - https://1drv.ms/p/s!ArK8DobLdEGXlZ9TQ4O0A5ppQg_qIw
Previous Code and Work - https://1drv.ms/f/s!ArK8DobLdEGXv2ToU1egG2D6Ef5O
Source Code: https://github.com/illinoistech-itm/factor

Additional Tools
- FFMpeg
- CMU Sphinx

Requirements
- Sub-Project: Project Convert
  - User Account Management
  - Administration and Site Management
  - Create a platform using FFMpeg that converts MP4 video for use in CMU Sphinx Speech to Text library
  - Create infrastructure to support this infrastructure on demand
- Sub-Project: SH-3
  - Storage and Metadata Retrieval of original sources and finished works
- Sub-Project: Window Pane
  - Sync Video with Transcript
  - Allow for Transcript Update while watching videos
  - Using HTML5 subtitles based on transcripts
  - Create anonymous functionality (site must work with people not logged in)
- Sub-Project: Marker
  - There is an existing Android App prototype of this application in the Github repo.
  - Create an application that allows uses to via drag-and-drop markup the unstructured text for use in producing a digital publication based on the a video transcript.
  - Create a library system for export to PDF and ePub

Project Factor Search Service (Result)

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Overview

Build a Speech to Text automated system backend to provide a search engine
Project Factor - Presentation - https://1drv.ms/p/s!ArK8DobLdEGXlZ9TQ4O0A5ppQg_qIw
Previous Code and Work - https://1drv.ms/f/s!ArK8DobLdEGXv2ToU1egG2D6Ef5O
Source Code: https://github.com/illinoistech-itm/factor

Tools:
- Lucence - Apache Lucene and Solr set the standard for search and indexing performance
- Solr - Solr is the popular, blazing-fast, open source enterprise search platform built on Apache Lucene™.
- Hadoop -   The Apache Hadoop software library is a framework that allows for the distributed processing of large data sets across clusters of computers using simple programming models. It is designed to scale up from single servers to thousands of machines, each offering local computation and storage. Rather than rely on hardware to deliver high-availability, the library itself is designed to detect and handle failures at the application layer, so delivering a highly-available service on top of a cluster of computers, each of which may be prone to failures.

- Sub-Project: Baker
  - Baker takes the results from the User Facing Portion of the Factor Project and enters the modified transcripts into Solr/Lucene (Opensource search and indexing platform).
  - Need for user authentication system (can be shared with other Factor group)
  - Create enterprise based search system
  - Create a system that correlates results with timestamp URLs directly into Raw Source video
  - Create a query API via REST - limit the query rate for those not authenitcated (this can be the anonymous mode)

BugOverflow

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Reverse Engineer https://stackoverflow.com to make a Question and Answer style site

Identify the features on Stackoverflow

- Generate Login and account management code
- Generate account and reputation system
- Generate GPS coordinate mapping (additional feature that charts posted results and charts them via Google Maps or Bing Maps)
- Create anonymous functionality (site must work with people not logged in

@WithU Ride Share

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Search for other ride sharing websites. Identify their features. Reverse engineer their foci. Create a match making system and or mobile app that allows people to register and connect those looking for ride shares

- Create account management and log in system
- Create features to allow people to see what is available to ride share without publicly revealing (test or watch feature)
- Allow notification system (integrate with Messaging services via Amazon or Azure) to let others know someone has gone visible in a certain radius for carpooling
- Devise a mechanism to exchange data and verify each party
- Create anonymous functionality (site must work with people not logged in

Hawkstagram

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Analyze and reverse engineer sites similar to Flicker, Instagram, and any other photo sharing site in order to create a photo tagging, sharing, and resizing application

- Create a user account and log in mechanism
- Create an admin section for processing uploads
- Create a tagging system for each photo
- Create photo manipulation tools (multiple size exports/downloads)
- Create a category separation (pictures with releases and without)
- Create anonymous functionality (site must work with people not logged in (create a category that is public domain)

Multi-site Wordpress Deployment (Mock IPRO deployment)

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The IPRO program has a stated goal of producing shared research amongst students and the public. Your team will create a system that will seamlessly handle these issues while enabling IPRO teams to proliferate and exchange knowledge and documents between semester groups.

Tools:
Wordpress

Multi-site Wordpress - https://www.digitalocean.com/community/tutorials/how-to-set-up-multiple-wordpress-sites-using-multisite
Create a multi-site Wordpress system that creates users, blogs(pages), and accounts per IPRO group - based on this listing: https://ipro.iit.edu/courses/current-projects/