

==Win-win session one 9/18==(1h16m)

## Competitive Research

- BuzzSumo (<https://buzzsumo.com/>)
- Feedly (<https://feedly.com/i/welcome>)
- Ahrefs' content research tool (<https://ahrefs.com/>)
- EpicBeat (<https://epicenter.epictions.com/epicbeat/explore/>)
- Trend Watching (<https://trendwatching.com/>)
- Trend Hunter (<https://www.trendhunter.com/>)
- Trend Spottr (<http://trendspottr.com/>)

## Potential Data Sources

- Twitter (real-time)
- Major News Publications
- Google Trends
- Medium
- Quora
- Reddit
- Product Hunt
- RSS Feeds
- iTunes Music Store
- Major Sports site
- Rotten tomatoes / IMDB

## Risks & Potential Shortcomings

- Scalability: How to automate across different sites? Tackle by site/category/vertical?
- QA: How to measure trendiness (i.e. shares, likes)? How to normalize results across sites/categories/verticals for comparison? How to monitor for accuracy and freshness?
- Maintenance: How to fix broken site configurations?
- Holes in staffing after the first semester

## Questions-MR

- How do advertiser and content creator use cases differ? How are they similar?

- What types of content creators are being targeted? (i.e. general blog writers, product reviewers, game creators, etc.)
- Where do advertisers fit in? Is this a two-sided market scenario requiring separate tools tailored to each side?
- How do content creators currently generate ideas for new content? Does this process differ based on the type of content they produce? What pain points exist?
- What makes a topic “trendy”? (likes, shares, etc) How do you normalize this measurement of trendiness? (i.e. #fb shares/likes vs twitter retweets/likes vs Medium applause, etc)
- How will the end product differentiate itself from the competitive landscape? What are its defining characteristics and unique features? What is the value proposition for creators? Advertisers? System 1?
- Who will provide technical mentorship to us?

## Questions-JB

- How to select a date--user input? E.g.:
  - Search all tweets past year?
  - Search all tweets in October for the past X years?
- Different visualizations per data source?
  - Differentiate tweets from facebook posts, etc.

## Projects Visions

1. buy site goal:
  - a. aggregate all the data to figure out what are the recent trends
2. Data retention
  - a. a few months
3. functionalities, Linda’s prospect [not sure]
  - a. search →
  - b. data from facebook, twitter....
  - c. number of the piece
4. mentorship
  - a. content creator
  - b. spresheet
    - i. share with us → screenshot
    - ii. dependent on how much time we have
5. No performance requirement
6. technology
  - a. backend: python
  - b. frontend: no react, javascript → plain, nothing fancy

## Q & A

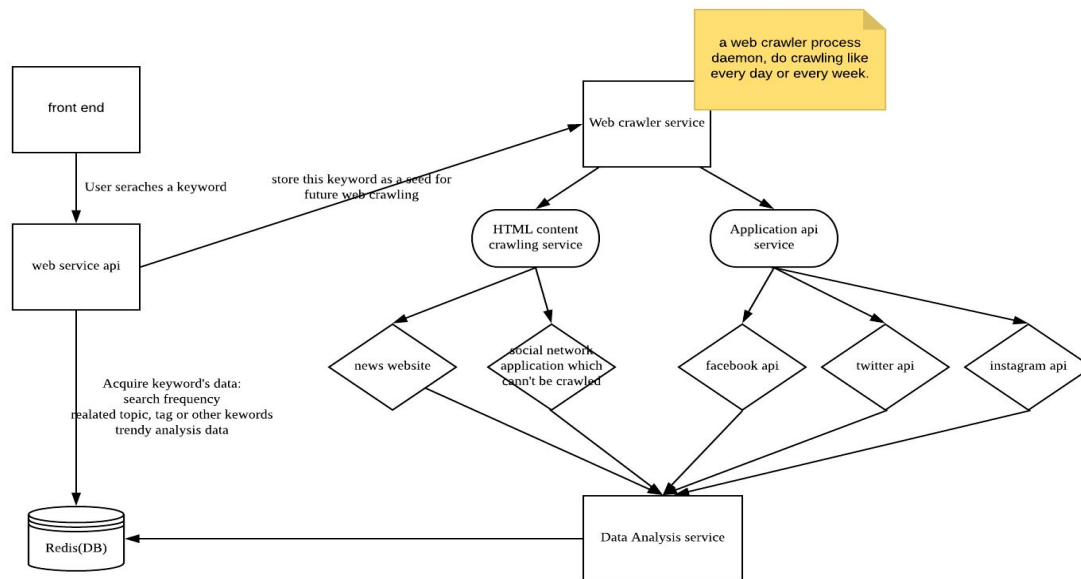
- how to normalization
  - c. they may tell us most profitable things
  - d. like spike → may be, [not sure]
- Narrow the scope
  - e. ??

## program model

1. two assumptions:
  - a. people are willing to share the picture, actually not all of them want to show that
  - b. Fan's assumption:
    - i. we may need to crawl the data from the website, but not all the website are allowed to be crawled by our crawler?
    - ii. we may assume the words that appear most may be the trends, it could be not
2. who is involved this project
  - a. maintainer [don't care]
  - b. developer [our team]
  - c. users(content creator)**
  - d. advertiser (not common)
    - i. partener, have traffic,
3. what is the benefits of this project
  - a. speed up the process
  - b. reduce cost
  - c. create the confidence for the advertising

## List at least 5 win-win conditions

- before Friday, it's okay to be duplicate, use content creator as examples
- Goal:
  - To make sure we understand the content correctly
- fan's examples:
  - As a content creator, I can search the trends by key words.
  - As a content creator, I can filter the trends by topic, games.
  - As a content creator, I can learn from the visualization tool, like charts with time to see the history of the trends for a specific keywords. There may be some spike so that we know at that time, it is the trends. I can use this tool to create the confidence to sell the ads traffic.



Front end: React / Vue, Highchart library

Back end: Java Spring / Python flask

web crawler: scrapy (python web crawling library)

Data Analysis: to be discussed

Database: mlab(mongoDB) or any other available databased(aws, gcp...) will include redis, elasticsearch in the future

## ==Skype Meeting 9/19==(2h46m)

### What we did?

- Assigned primary and secondary roles
- Looked into the bi-weekly project plan
- Populated the WinBook with Win Conditions, spent some time to go over them
- Populated the assumptions in the Program Model
- Went over upcoming assignments / tasks, made TODO action items
- Collected questions to go over in Win-win session 2
- Determined weekly group meeting time

### Things to go over in Win-win session 2

- Concern: losing staff after Fall semester
- Scope issue
- What COTS to use? Site API?

- Project Plan format
- Current workflow of System\_1, specifically content creator
- Client's definition of "trend"
- Maintainer staff after the project is handed off to the client? Knowledge transfer?
- Affordability of resources / computational power to support crawling and database? AWS?
- Discuss win conditions with client, what win conditions do we agree on? Assign a difficulty to the agreed conditions. Start budgeting on the features in plan
- Client to identify site / data sources for trend discovery, which of them provide an API? If not, how high is the priority of that specific resource?
- Exploration phase OCD LCP FED CIR for prototype presentation? Other files needed?

## TODO for the team

- Revisit roles
- Revisit the site design
- Investigate: Article ID shared across platform?
- **Weekly meeting time Wednesday 7pm PDT**

==Win-win session two 9/21==(1h29m)

## Winbook

1. As a content creator, I can customize my range of source(i.e. only on Twitter or only on CNN) when I try to search.
  - a. make sense
  - b. Deng: scope of the size, users used often
    - i. sites: ad beets , for analysis
    - ii. workflow: very free.
    - iii. basic guideline: no
    - iv. quiz topic? HQ??
2. As a content creator, I can compare different trends to see which one has higher popularity.
  - a. ok
3. As a content creator, I can see relevant tags of what I just searched.
  - a. ok
4. As a create creator, I can trace the source of the trends
  - a. ok
5. [issue risk]As a content creator, I can see how a topic distributed among people with different ages.
  - a. other features, ages, range,
  - b. technical problem
6. As a content creator, I can sort the result trends with my own filter
  - a. see comment

7. As a maintainer[rename as manager], I can see how what's my users are searching and analyze their behaviors.
  - a. good
8. As a content creator, I can see a rank of all trends within 1 click
9. [duplicate]As a content creator, the web could automatically show the recent trends without any filters or search.
10. As a content creator, I can create an account to save some topic and keywords for my future use.
  - a. depend on the time /
11. [not must]As a maintainer, I can limit the traffic of abnormal user to save the server
12. [not must]As a content creator, I can subscribe the search result by weekly email notification
13. As a content creator, I can search for a hashtag and see how it has trended over time.
14. As a maintainer/developer, I can expect the web scraping algorithms to be modular by data source.
  - a. Linda:make sense
15. As a content creator, I can share trends with other content creators.
  - a. easy, share some deep link
16. [not necessary]As a content creator, I can choose different trend visualization styles.
  - a.
17. [not necessary]As a content creator, I can download the trending keyword suggestions as a spreadsheet with timestamp.
  - a. ok
  - b. or use system 1 email,
    - i. google spreadsheet, people could mark
18. As a client, I can learn to use the system with minimum reference to the documentation.
  - a. absolutely
19. As a developer, I can do relatively low-cost knowledge transfer to new staff with the aid of well-written documentation.
  - a. yes
20. As a developer, I can re-crawl the web sources every day, preferably during the period of time with relatively low user activity.
  - a. yes
21. As a content creator, I can view keyword suggestions for trends that are related to my current search.

## Our questions to client

1. design doc
  - a. API could be narrow down
  - b. more documentation
2. current workflow of the content creator?
  - a. Linda: interview content creator
  - b. painful of the content creator -- Linda: will talk to director of content creator
  - c. definition of the trends
3. technical skills
  - a. get someone review our design

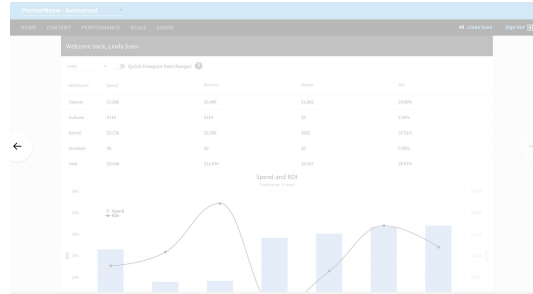
- b. review our pr
- 4. server
  - a. AWS
  - b. Linda will provide : we need to provide a range of [high budget -- low budget]

## Prototype discussion

- **About yiming's UI:** Chat part: don't need, we can use Slack board function
- what the content creator use now:
  - <https://www.adbeat.com/>
- Souce
  - facebook 80%, check if there is API
  - twitter → location
- Trends definition
  - Not only the headline should be same, but also the topic should be similar
- feedback loop
  - good to have feedback loop → phase 2, 3 we just deal with the beginning of the functionalities right now

## Michael's question: Linda

- Content
  - ex: search animal? they want the same headline keywords as well as **topic**
  - best to broke down further
- Prototype:
  - They just want to show the recent trends, Search is not very often used
    - e.g. first page: tell us the trends
- how people use it
  - Linda will slack us what other sites are used
- API: (crawler is not good)
  - facebook API: 80%
  - twitter API → location
- UI
  - not necessary beautiful, but should be user friendly
  - example:



- dashboard
  - not necessary
  - let's focus on the functionalities
- client meeting
  - TBD

==Skype Meeting 9/23==(3h53m)

What we did?

- Completed first risk and defect report
- Completed first progress report
- Initiated PC-2
- Discussed task assignment mechanism
- Went over upcoming dues

==Skype Meeting 9/24==(1h28m)

What we did?

- Identify prototype demo deliverables
- Make ideas
- Split the tasks between the team
- Determine future meeting schedule for prototype presentation



## ==Skype Meeting 9/26==(48m)

### What we did?

- Report progress on prototype demo deliverables
- Go over issues and questions on prototype development
- Discuss ideas for prototypes
- Go over presentation flow
- Set up next team meeting for mock presentation

## ==Skype Meeting 9/27==(1h26m)

### What we did?

- Worked on the presentation slide deck
- Did two dry runs for the presentation

## ==Meeting with content manager 10/2==(1h)

### What we did?

- Go over questions with the client
- Showcase UI design and get feedback

### Notes

- Find out which verticals we need quiz ideas for by checking the verticals on the brainstorm list
- Type of the content:
  - Knowledge etc
- Vertical of the content:
  - Education
  - Entertainment
  - History
- Competitor URL for comparison
- Notes - equivalent to "Idea" in our design?
- Consider variations of already successful quizzes?

- Check competitor's quizzes:
  - Competitor sites:
    - Buzz
    - Playbuzz
    - Mental Floss
    - Quiz Rocket
    - adBeats: searching quizzes that are spending a lot
- How to aggregate data from adBeat?
- Spending most on a quiz -> most successful (the content creation site is spending this much to get the content out there. In order to profit, the traffic gained from this content piece needs to generate value over this spending)
- Engagement cross referencing with spending on a content piece from competitor site? Engagement is number of sharing, not likes. Sharing brings free user.
- Integration with adbeats? Do they offer developer API?
- Identify the targeted user flow? Demographics?
- Focus on snapchat, facebook
- One person check content quality
- The other person check performance
- 22 content writer -> 186 articles/week, will double the number of writers, 30% is successful
- Approved content piece goes to a second spreadsheet for review
- Reviewed content piece goes to a third spreadsheet with the writer / image editor's info
- 4 roles: write, image editor, editor (final review), Admin(two admins rotate to get the 1st level approval, then 2nd level approval from the other team) will decide to publish or not.
- First level (content creation team), second level(buyside team), the 2 approvals take one week.
- Data science team does not touch content creation, they decide the correct pricing for the content piece.
- 1% of the world's domain
- Add to the idea portal:
  - Vertical
  - Type
  - Targeted buyside site (can pick the ones where this content piece is going be posted)
- Need to look at historical trend and decide / predict future trend couple weeks away (5 weeks?)

## ==Skype Meeting 10/2==(3h44m)

### What we did?

- Project plan updates
- Bi-weekly risk and defect report
- Bi-weekly progress report
- HW3
- ARB schedule

## ==Slack Discussion Note==

System1 just turned 5 years, and in the last 5 years, we've acquired 2 companies + scaled from less than 50 people to over 200.

We plan to build a prototype product which has limited core functionality(achievable) and service framework. If we do well, it would be easy for following engineer to expand other functionality and service.

- (1) Idea Management
- (2) Historical Trend Recommendation
- (3) Competitor Content Engagement/Shares with AdBeat Integration

Of these, (2) was ranked last given there may need to be some more analysis done (esp grabbing historical data and playing with it)

- (3) and (1) addresses pain points from different perspectives so we are open to both
- (3) will help with ideation which is the core of having great content
- (1) will address workflow, which is super necessary as we scale business

We are leaning towards (1) in terms of feasibility.

Part of the course and the ICSM development model we are expected to follow is about working through spirals/iterations to hone in on client needs and requirements. The pivot is right in line with that, and maybe even expected. It will also probably be easier to limit and scope (1), which was one of their main concerns about trend identification during our prototype presentation. We

already had some of the idea management concepts worked into our initial design as well, so it's not a complete pivot or restart by any means.

Obviously this sets us back slightly, so the end result may not be as fully fleshed out as it could have, but I think we should be able to work with you and the other managers to limit the scope and nail down core functionality to build something very useable by the end of the course.

## ==Skype Meeting 10/7==(2h)

### What we did?

- Review updated use case as a team
- Review robustness analysis diagram and finish HW#3
- Plan out upcoming week action items

## ==Skype Meeting 10/9==(2h)

### What we did?

- Discuss and split tasks on ARB presentation deliverables

## ==Skype Meeting 10/11==(1h)

### What we did?

- Go over demo design (UI design and potentially backend design)
- Go over current progress for ARB deliverables
- Discuss user workflow

## ==Skype Meeting 10/11==(2h)

### What we did?

- Reported progress on DC package docs / ARB presentation slide deck
- Went over questions / concerns
- Planed for presentation dry runs

## ==Skype Meeting 10/15==(3h)

### What we did?

- Reported progress on DC package docs / ARB presentation slide deck
- Went over questions / concerns
- Planed for presentation dry runs

## ==Skype Meeting 10/16==(4h18m)

### What we did?

- Modify ARB presentation slide deck
- Conduct dry run

## ==ARB presentation 10/17==

### Takeaways?

- More consistent term usage
- More detailed project plan / task distribution / how do team sync?
- Update client hours
- COCOMOII calculation pred

## ==Skype Meeting 10/17==(1h18m)

### What we did?

- Generate bi-weekly progress report
- Generate bi-weekly risk and defect report
- Go over plans for development phase

## ==Meeting with Client 10/31==(1h30m)

- Client gave feedback on ARB documentation
- Discuss frontend design in detail

## ==CCD 10/20==

improvement:

- \* More actions/operations provided to change a pitch. e.g edit, delete...
- \* UX/CSS styling: status color, user status icon(crown for super-admin...), change color schema based on System1 homepage
- \* Content contributor(user): status: active/inactive, indicating availability of allocating task
- \* Reorder of sidebar: goal, pitch, parking, calendar
- \* Redesign dashboard of super admin: design a board to display an evaluation of content contributors' work performance under certain date, user, etc..
- \* Redesign goal board of super admin: make a goal planned in weeks, provide CRUD functionality of this goal.
- \* Finish all the features

## ==Client feedback 10/27==

### Dashboard

- Weekly Goal KPI - We can turn this into a Week over Week (so 2 lines - this week vs last week). Instead of #, we can use % to indicate what % complete we should be during each day of the week.
- Personal Work Progress -
  - Need 3 bars -- Target, Pitched, Approved, and a Legend/Key (Finished is currently misspelled)
  - Need search function since there will be too many people!
  - Can we make this graph be vertical rather than horizontal? Sorted by A-Z, First Name
  - Would be a huge win if we can have also date filters and go back in time (to see historical performance) -- if not, it's ok ... this data is stored in DB, correct?

### **Goal Board**

- Make sure it is clear that goals are set on a weekly basis (highlighted week in the calendar)

### **Notifications**

- Notifications will be helpful if it can be configured. For example:
  - Thursday Morning - Send a notification to all content contributors if less than 50% of their goal is met with Approved Pitches
  - Thursday Morning - Send a notification to Super Admin if less than 50% of goal is met with Approved Pitches (overall)
  - Friday Morning - Send a notification to Super Admin with a list of all content contributors that have not met 100% of their goal with Approved Pitches

### **Draft Board**

- Here are the components needed:
  - Title (text)
  - Vertical (Dropdown based on distinct Verticals set in Goal Board)
  - Quiz Type (Dropdown: Screenshot, Personality, Knowledge, Endless Scroll)
  - URL
  - Inspiration (text, max 80 characters)
  - Suggested Buy-side Network (Dropdown: Facebook, Snapchat, Pinterest, Native)
  - Targeting Info (text)
  - Description (text, max 80 characters)

**==Client feedback on TRR 10/28==**

- Dashboard: Toggle Graph week view from Mon-Sun, to Fri-Thurs
- Verticals in Global Pitch board, should be drop down--should store the value of what is previously shown
- Bug: Calendar Board references parking table?
- Pick from drop-down for Super Admin vertical override
- Detail view Cancel/Confirm should be one 'Close' button