Let's Read!

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What have you been doing the most for this semester?

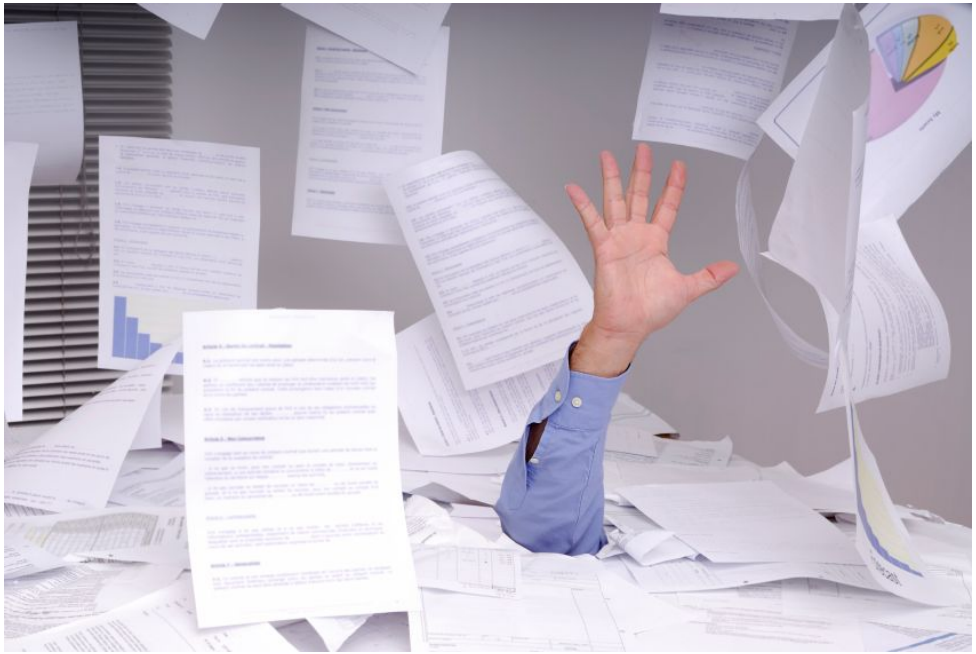
Schedule

Week	Date	Topic	Reading (response indicates a reading response is required for the article.)	Due
1	9/1	Introduction & Course Info (PDF)		
1	9/6	Introduction to crowdsourcing and human computation (PDF) Discussion by Juho (PDF)	(1) Howe, Jeff. "The rise of crowdsourcing." Wired magazine 14.6 (2006): 1-4. (2) Quinn, Alexander J., and Bederson, Benjamin B. "Human computation: a survey and taxonomy of a growing field." CHI 2011.	
2	9/8	Crowdsourcing platforms (PDF) Discussion by Oisen (PDF)	(1) response Ipeirotis, Panagiotis G. "Analyzing the amazon mechanical turk marketplace." XRDS: Crossroads 17.2 (2010): 16-21. (2) response Geiger, David, et al. "Managing the Crowd: Towards a Taxonomy of Crowdsourcing Processes." AMCIS. 2011. (3) Vakharia, Donna, and Matthew Lease. "Beyond AMT: An analysis of crowd work platforms." arXiv preprint arXiv:1310.1672 (2013).	
2	9/13	Worker Issues in Crowdsourcing (PDF) Discussion by Sang-gyun (PDF)	(1) response Irani, Lilly C., and M. Silberman. "Turkopticon: interrupting worker invisibility in amazon mechanical turk." CHI 2013. (2) response Martin, David, et al. "Being a turker." CSCW 2014. (3) Bigham, Jeffrey P. "My MTurk (half) Workday." (4) Gray, Mary L., et al. "The crowd is a collaborative network." CSCW 2016.	Assignment 1: Be a crowd worker

Reading Response

You'll **READ** and **CRITIQUE** influential research papers and articles in crowdsourcing.

Motivation



Problem Statement

Novice researchers face difficulties
in reading scientific papers of *unfamiliar fields*
with a *good level of understanding*
in a *short period of time.*

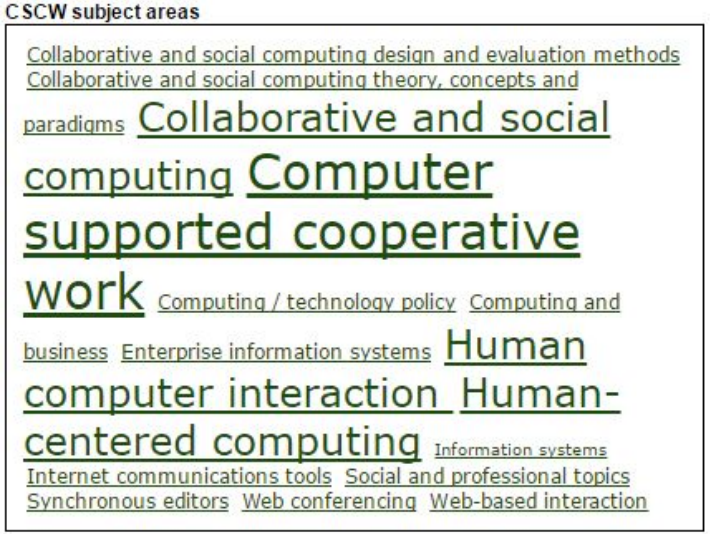
Tasks we want to support

- Task1: Grasping the trend of conferences
- Task2: Writing critique of a paper
- Task3: Reimplementing the paper

Depth of understanding

Task 1 : Grasping the trend of conference from dozens of papers

- Sean is a 25-year-old **graduate student** who has newly joined KIXLAB.



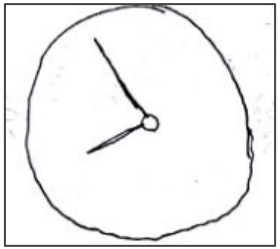
Task 1 : Grasping the trend of conference from dozens of papers

- Sean has **little background knowledge** of crowdsourcing discipline. Thus, while reading each paper, he feels **hard to understand the concept** of paper or even misunderstands it. To avoid it, he should read the paper in detail, which is very **time consuming**.

- Thus, through our solution,
    i. he could get **quick overview** of the paper.
    ii. **skimming comes easy** with the service, reducing Sean's reading time.
    iii. **summary** of the paper **in several dimensions** is provided.

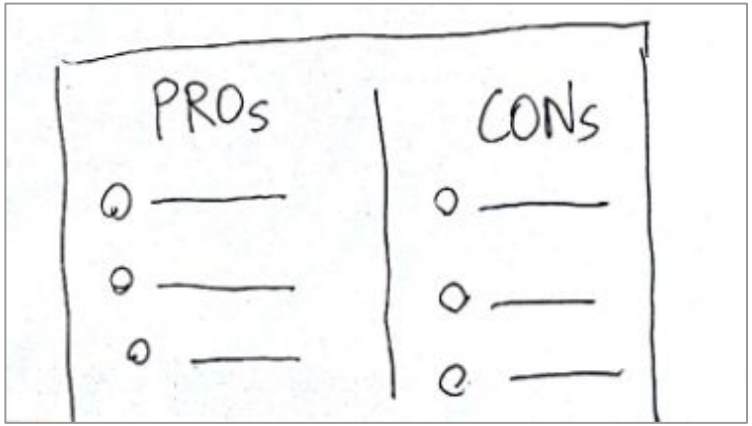
Task 2 : Writing critique of a paper

- Junsoo a 25-year-old **graduate student** and has little experience with paper reading.
- Professor gives a **paper critique assignment**, which will help my research capability.
- As the deadline approaches, he doesn't have enough time for a good critical analysis.



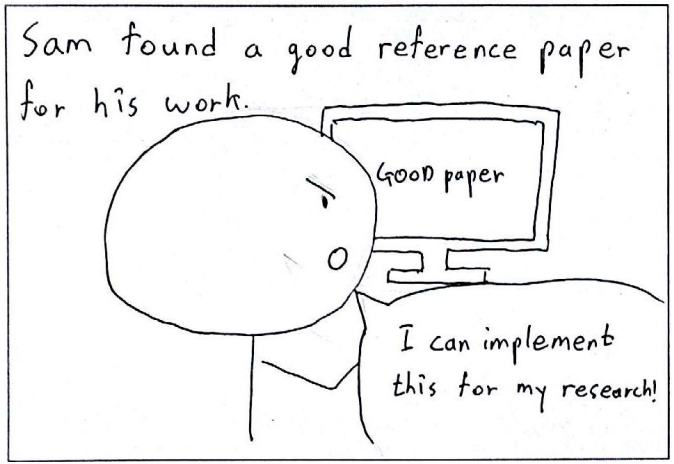
Task 2 : Writing critique of a paper

- He goes to our solution and sees that the paper is analyzed by others.
- Through the solution he can:
    i. obtain a solid **list of strengths and weaknesses** of this paper,
    ii. as a result **understand the content** of the paper in such depth that he can perform his own critical analysis,
    iii. achieve that in less than 30 minutes.



Task 3: Reimplementing the paper

- Sam, 23-year old **first year graduate student**
- Find out a **key paper** about crowdsourcing application. After scanning the contents, he think it would be a good starting point to construct his own experiment so try to **re-implement** the paper's experiment program.



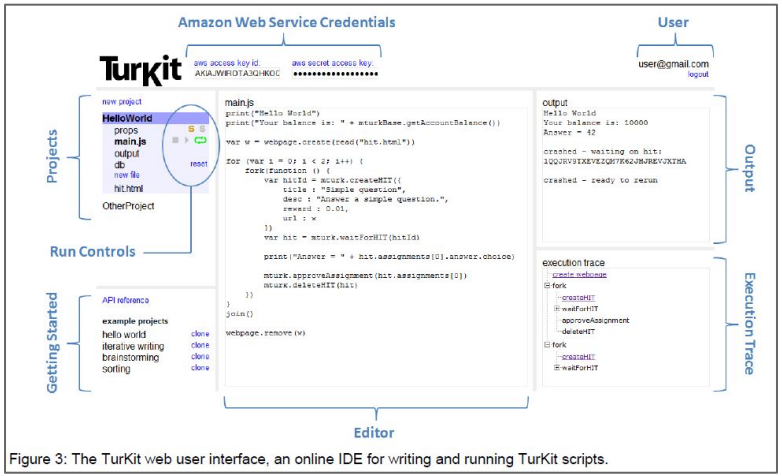


Figure 3: The TurKit web user interface, an online IDE for writing and running TurKit scripts.

Task 3: Reimplementing the paper

- The paper shows only a bare pseudocode and a sample class. There is **no specific implementation details** such as web circumstances, or meanings of all program functions. He **has lots of questions**, but can't ask mentor or senior students all the time when he stuck.

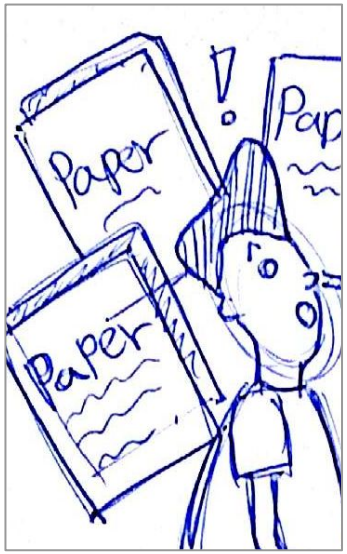
- Using our solution, Sam can
  a. Find **directed annotations** of a pseudocode which leads to actual explanation in the paper
  b. Watch **other users' coding trials** in various programming platform
  c. Read **step-by-step coding guide** written and verified by other readers.

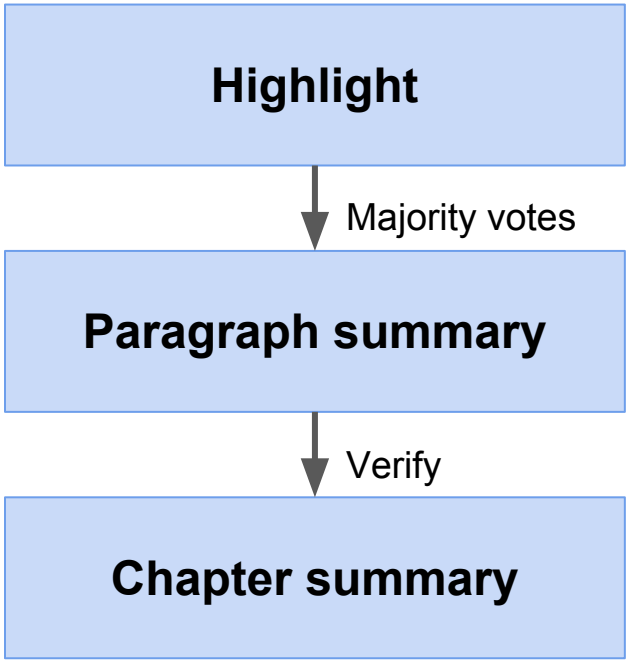
  As a result, Sam easily understand the program structure and complete his task.

Solution1: Co-summary

Do summary tasks while reading the paper

Target crowd: Lab members





Solution1

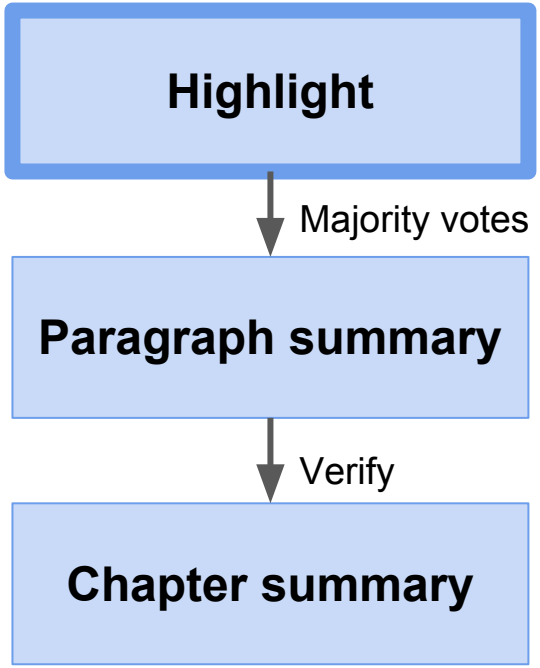
Start reading

The Human Macro: Natural Language Crowd Scripting

Embedding crowd workers in an interface allows us to reconsider designs for short end-user programming tasks. Typically, users need to translate their intentions into algorithmic thinking explicitly via a scripting language or implicitly through learned activity [6]. But tasks conveyed to humans can be written in a much more natural way. While natural language command interfaces continue to struggle with unconstrained input over a large search space, humans are good at understanding written instructions.

The Human Macro is Soylent's natural language command interface. Soylent users can use it to request arbitrary work quickly in human language. Launching the Human Macro opens a request form (Figure 3). The design challenge here is to ensure that the user creates tasks that are scoped correctly for a Mechanical Turk worker. We wish to prevent the user from spending money on a buggy command.

Solution1



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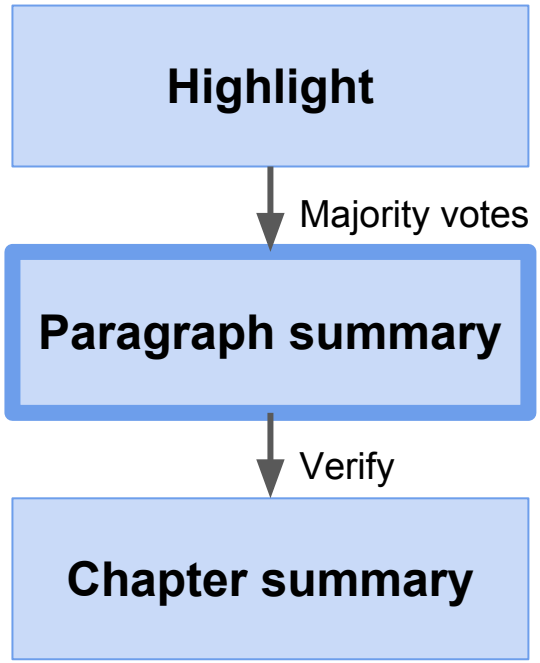

The Human Macro: Natural Language Crowd Scripting

A

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B

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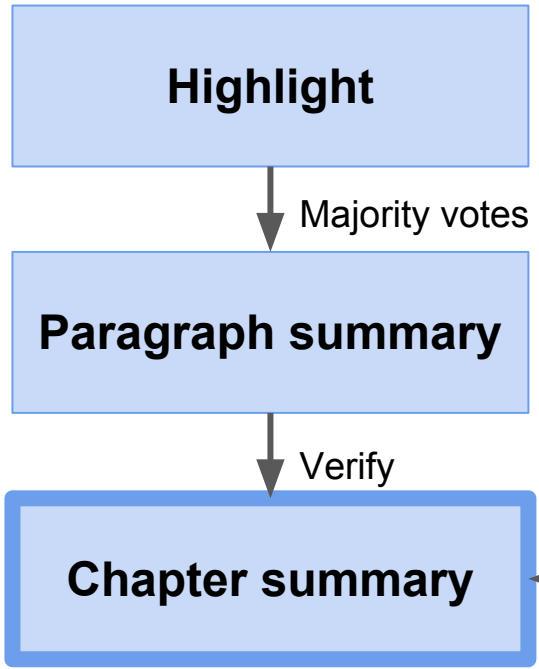

A
b
C
..

The Human Macro: Natural Language Crowd Scripting

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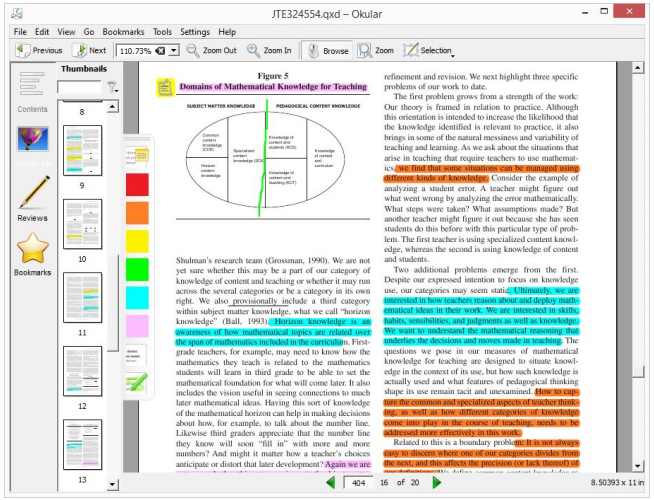
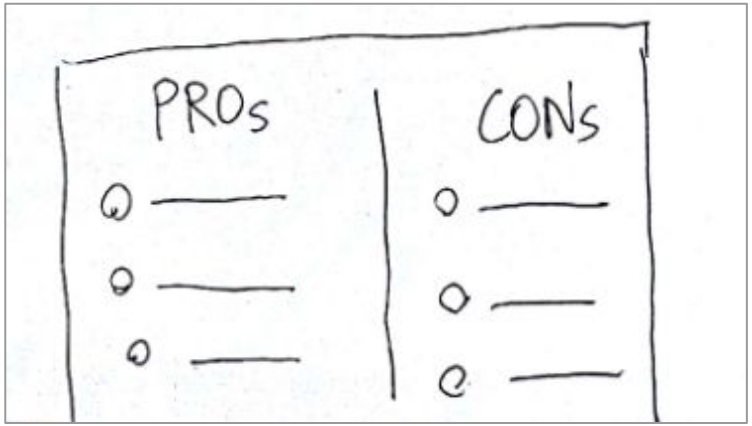
Solution2: Pros & Cons

Produce a solid list of strengths and weaknesses of the paper

Target crowd: class, or study groups





Solution2: Pros & Cons

Highlight & Tag → Discuss → Evaluate

Detecting precise timing of a step. We observed that Turkers add new steps with higher latency than trained annotators, resulting in Turker-labeled time points being slightly later than those by annotators for the same step. The trained annotators often rewinded a few seconds to mark the exact timing of a step after seeing the step, whereas most Turkers completed their tasks in a single pass. While this might be a limitation of the workflow, our results show that a reasonable window size mitigates differences. We will explore time-shifting f timing accuracy improves.

Limitation

. The trained annotators often rewinded a few seconds to mark the exact timing of a step after seeing the step, whereas most Turkers completed their tasks in a single pass.

Any additional limits?

A: This didn't consider this point.

Which analyses are invalid?

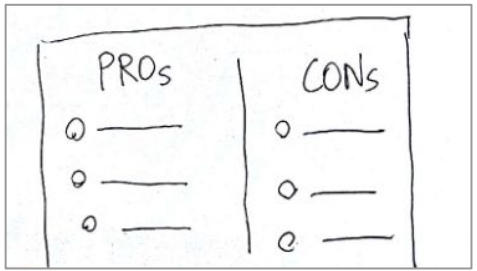
A1: This didn't consider this point.

A2: This is stupid.

A3: This assumes that this is the case.

Aggregate

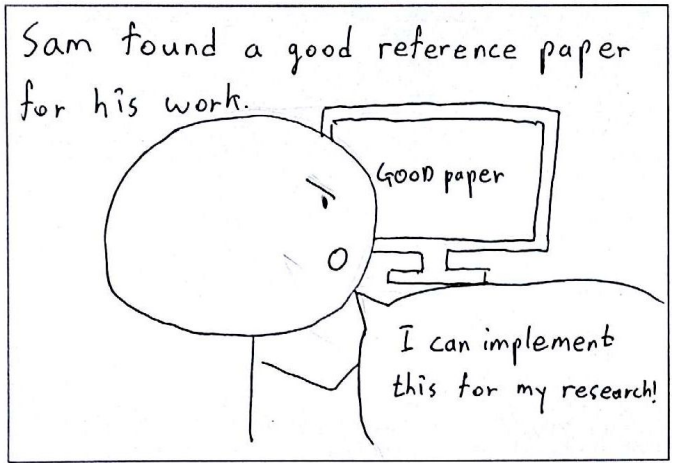
Final output:

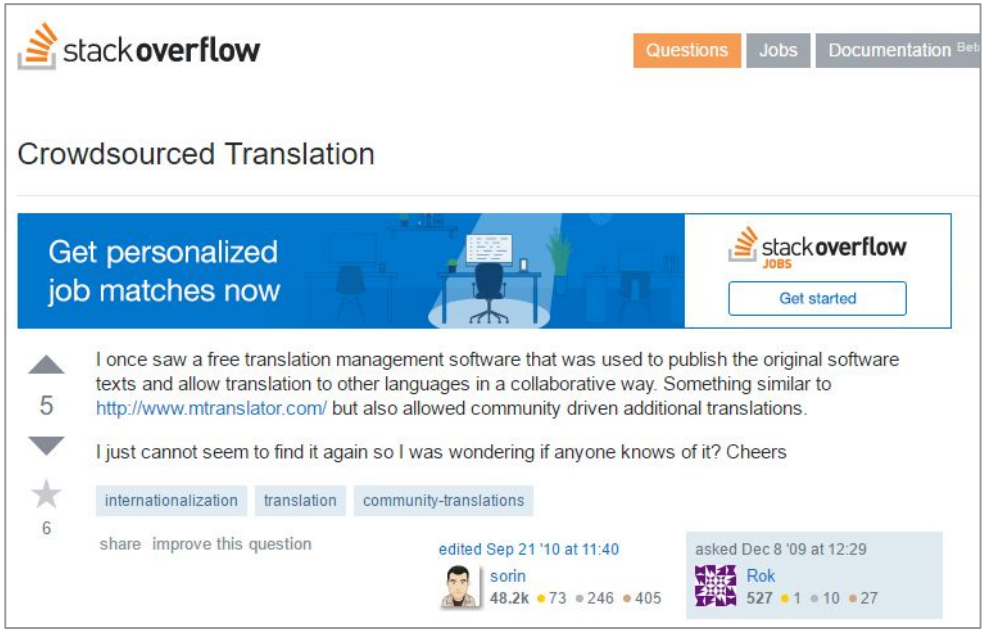


Solution3: Micro-stackoverflow

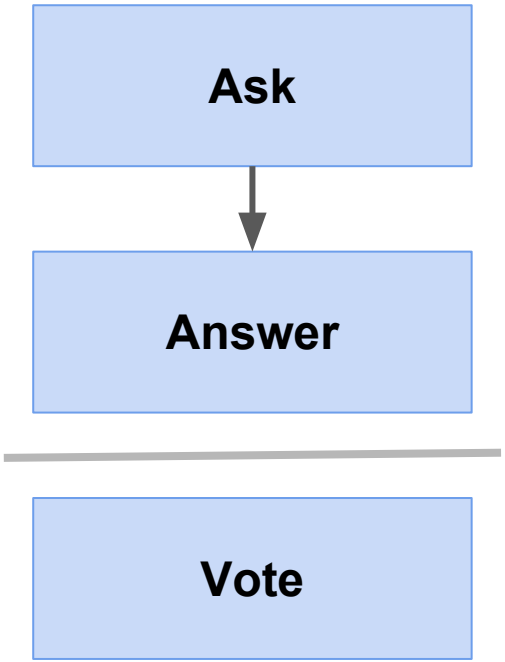
In-paper Q&A service

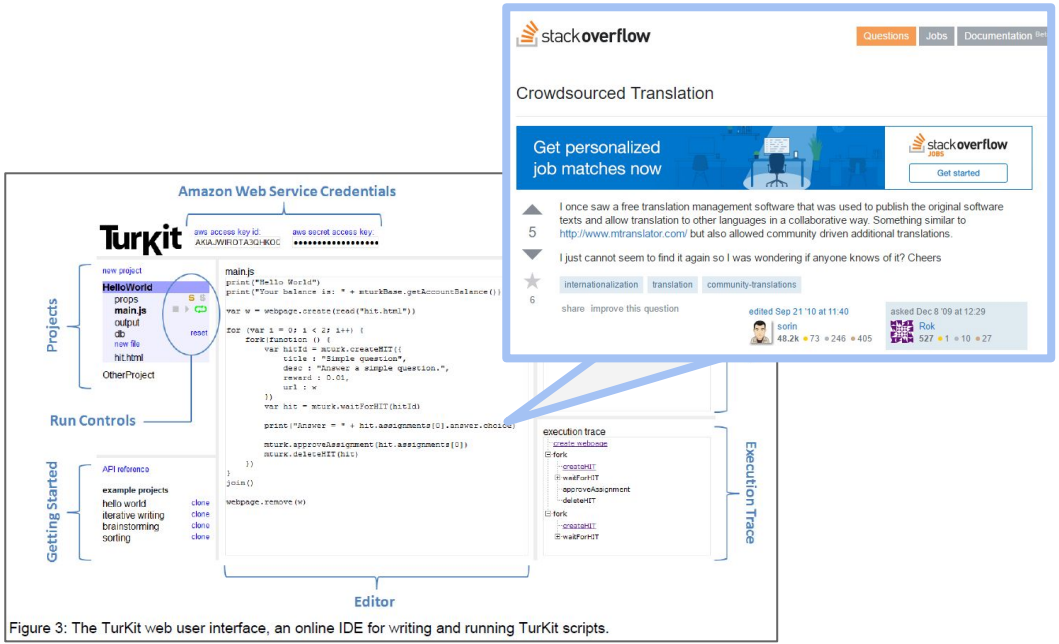
Crowd target: global





Solution3: Micro-stackoverflow





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Compounded solution

Co-summary

Micro-stackoverflow

Pros & Cons

- Paper augmented platform
- Readers = Requester+Worker
- Support interactive reading
- Aims to benefit readers (workers) at any point of task

Plan

- Main roles
  - Project Manager, Programmer - Junsoo
  - Platform Design, Programmer - Youngbo
  - Task Design, UI/UX Designer - Sanggyun

- Crowd gathering plan?
  - test it with reading response assignment in class
  - host a public website to gather volunteers from various labs and study groups

Thank you for listening…

Q&A