Forward

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Today’s topics

- Feedback from Meteor
- Academic incentives
- Are we research? Organization?
- What are our upcoming goals?
- Smoothing out credit and coordination
- This week’s milestones
My goal

• I view one of my main prerogatives as helping us innovate the mechanics and social contracts of crowd research. This is, itself, meta-research!

• We are constantly experimenting, and I take all critiques as user feedback that we can use to improve our experiment.
Feedback from Meteor

Michael’s concrete changes and suggestions will come afterward. This is a summary.
Incentives and motivators

• Niki: “If we cannot work with trust and power among ourselves. If badges or other issues is taking trust away, we need to think twice.”

• James: “I know I've had to make a few shout outs in order to obtain badges for my work”
  • “People will need to make their work noticed and need to focus on advertising”
Incentives and motivators

• Angela: “Badges allocated are not an accurate representation amount of contributions.” (e.g., weighted equally)

• “Engineering research is an essential part of this work and it can be tracked in githubs and by PRs. People in that team do not talk much but their presence and contribution is of high value.”
Incentives and motivators

• Suggestions
  • Badges can only be given by DRIs
  • Explicitly weight badges
  • Log time manually
Long-term plans

• The zeitgeist: we view ourselves as research but with a long-term goal of becoming an organization when we succeed

• Reason: as we succeed, we will need operational support and full-time contributions to match our vision
  • Pumas: “It might be more efficient to adopt a more traditional production model”
Long-term plans

• Pumas: “Crowd Research can be the ‘labs’ aspect of the startup that focuses on conducting research.”
Collaboration and Milestones

• James: “When joining a milestone, you are actually joining a work group for the week. Each group must then discuss […] what their plan is for the week.”

• Angela: “Identifying set times during the week for team Slack chat on a particular topic […] helping participants to identify when others on their team will be online should move work forward quickly.”
Collaboration and Milestones

• Dilrukshi: difficult to understand how to contribute sometimes

• Pumas: “be explicit in getting team members to commit to define their own milestones within the team tasks and let them track their own progress.”
Open governance

- Debate: how much control does the LB have? Is it advisory? Or can it make plans and assign DRIs, change the model (e.g., to a profit share), use resources to build features?
  - Trgve: “the LB should be seen as the executive in a democracy; empowered to make decisions.”
  - Others: it should be more advisory and allow platform developers to make decisions
What we’ll do
Academic and research incentives
### Top publications - Human Computer Interaction

<table>
<thead>
<tr>
<th>Publication</th>
<th>h5-index</th>
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</thead>
<tbody>
<tr>
<td>1. Computer Human Interaction (CHI)</td>
<td>84</td>
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<tr>
<td>2. Conference on Computer Supported Cooperative Work (CSCW)</td>
<td>46</td>
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<tr>
<td>3. ACM Symposium on User Interface Software and Technology</td>
<td>41</td>
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<tr>
<td>4. Handheld and Ubiquitous Computing (HUC)</td>
<td>40</td>
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CHI is a top research venue
Why publish?

- Being a core author on a paper at a top-tier research conference is an incredible boost up in getting accepted into graduate school (masters/PhD).
- The higher your place in the author list, the more reputation you gain from the paper

- I got my faculty position at Stanford because I published a paper (eventually a series of papers) that became highly cited
How I got into MIT grad school

- Collaborated on a paper with a Stanford professor as an undergraduate

Reflective Physical Prototyping through Integrated Design, Test, and Analysis

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ABSTRACT
Prototyping is the pivotal activity that structures innovative collaboration and activity in design. Prototyping requires the design and testing of tangible materials, the embodiment of complex ideas in physical media, and the discovery of shortcomings through feedback and reflection. This paper presents an integrated method for prototyping that supports reflective design and testing through the design of dynamic and interactive physical prototypes. The approach combines design, test, and analysis in a single process to facilitate iterative refinement and innovation. The paper describes the development of a new tool for physical prototyping and demonstrates its application in a case study of a complex design challenge.
My goal...

• Is that you could make this kind of transition too.

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ABSTRACT
Prototyping is the pivotal activity that structures innovation, collaboration, and creativity in design. Prototyping is a process that allows designers to create physical representations of their ideas, which can be tested and evaluated by others. This process is crucial for the success of innovation, as it allows designers to explore different ideas and make changes before committing to a final design. However, prototyping is often not well understood or practiced in a systematic way, which can lead to inefficiencies and wasted effort. This paper presents a new approach to prototyping that integrates design, test, and analysis, allowing designers to create more effective and efficient prototypes. The approach is based on the idea that prototyping is a form of design that can be studied and improved using the methods of design science. The paper describes the approach and provides examples of its application in a range of design contexts.
Soylent: A Word Processor with a Crowd Inside

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ABSTRACT
This paper introduces architectural and interaction patterns for integrating crowdsourced human contributions directly into user interfaces. We focus on writing and editing, complex endeavors that span many levels of conceptual and pragmatic activity. Authoring tools offer help with pragmatics, but for higher-level help, writers commonly turn to other people. We thus present Soylent, a word processing interface that enables writers to call on Mechanical Turk workers to shorten, proofread, and otherwise edit parts of their documents on demand. To improve worker quality, we introduce the Find-Fix-Verify crowd programming pattern, which splits tasks into a series of generation and re-

answer ourselves [8]; masses of volunteer editors flag spam edits on Wikipedia [13]. Writing is no exception [7]: we commonly recruit friends and colleagues to help us shape and polish our writing. But we cannot always rely on them: colleagues do not want to proofread every sentence we write, cut a few lines from every paragraph in a ten-page paper, or help us format thirty ACM-style references.

As a step toward integrating this human expertise permanently into our writing tools, we present Soylent, a word processing interface that utilizes crowd contributions to aid complex writing tasks ranging from error prevention and paragraph shortening to automation of tasks like citation
Why publish?

- Publishing is how you tell the world about your research results. It’s not “public” until it’s published.

- To get published, you need to go through an extremely rigorous process of peer review by other HCI and crowdsourcing experts.
  - Our poster paper will have a light version of peer review.
How can Michael help?

• You will be an author on the full paper we submit to CHI. This is an incredible resume point for jobs and graduate school.

• I can write recommendation letters for your applications to graduate school or college.
Recommendations

- Letters of recommendation are core to your chances of getting into graduate programs.

- I am happy to write letters for contributors to this project.
Recommendations

• What I can include in my letter:
  • A discussion of your contributions to the project
    • Self reported by you to me
    • Described by your colleagues on the project (I will reach out)
    • As evidenced on Meteor, GitHub, Wiki, etc.
  • Your PageRank level within the community
    • Why? Academics need rankings to make comparisons. Being 30/500 is good, 1/500 is amazing
    • For example, when I write letters for my Stanford students, I am asked to compare them to other Stanford graduates
Recommendations

- What I can include in my letter:
  - Your collaboration strengths, leadership and behavior
    - From me, your colleagues, and as logged on our platforms
  - Other items by request and mutual agreement
Where we are going

Research and organization
So far: UIST

- With UIST, we showed that we can take on the world, and that crowd research is producing real results.
  - UIST is a top-tier research venue
  - Work-in-progress papers are ~50% acceptance rate and are mostly an advertisement that we’re working on something
  - It is “non-archival” and does not formally count as a top-tier publication, just an indication that good work will likely lead to one
August 31: Platform is online, real work is being done on it

- Task creation, including Prototype Task foundation
- Task feed and task submission
- Task review

- Our first workers (skunkworks)
- Our first work (skunkworks)
September 25: CHI paper

- This is the outcome that will be central to those of you who want to apply to graduate schools

- This outcome proves to the world that we exist, and that we matter. This is the launchpad to our success.
September 25: CHI paper

- A full paper, 10 pages, at CHI, with you as a coauthor
  - A CHI paper will need:
    - A working platform
    - Fully thought-through and implemented foundations
    - Real usage that we can report
What about an organization?
Transitioning

• We agree that the project is doing research currently.

• However, we agree that as the platform gets real work on it (which will be hard to do, but very rewarding!), it will need to reconsider its position.

• At that point we should transition into an organization.
  • Let’s retain the research DNA even after this point
Let’s make a trigger

• A trigger will be our formal criteria for beginning that transition.

• We want something that is a strong indicator we are achieving liftoff and will succeed.

• Our trigger: 100 projects completed per week
  • Fine print: from at least 15 different requesters — this can’t just be just Rajan spending his savings to post work to the platform
Summary

July+August: get the platform going!
September 25: submit the CHI paper
100 tasks/week: transition
Credit
The importance of formal credit

- This is how we determine our author list
- (And if eventually relevant, organizational equity…)

- However, while the UIST author list was pretty accurate, badges were not exactly capturing our goals
Badges

- We will keep badges, and continue to use them for kudos and records of accomplishments, but they will not formally determine order

- Use them heartily and often!
Quarterly feedback

- Every three months (or before a major deadline), we’ll give people 100 credits to allocate across the contributors to the project.
  - We let you summarize your contributions on the wiki before this credit vote happens
  - Give proportional credit to whoever you think is most critical to our success
  - We will then run PageRank on this credit vote network to prevent small groups from accidentally influencing the vote
Public visibility of contributions

• Let’s put our team on a public webpage for the project
  • Everyone who is making serious contributions will be included
  • The list will be ordered by this credit ranking
Paid research

Please apply!
Why?

• Many open contribution projects augment their crowd contributions with organizations
  • e.g., Wikipedia
  • e.g., Ubuntu Linux
  • e.g., MongoDB

• We will empower our core contributors to put more effort in by making them paid researchers
Who?

• There are SO MANY AWESOME PEOPLE HERE

• Right now I think I can find research funds for ~2 people full-time
  • I will apply to as many funding opportunities as possible so we can expand that group

• Application process this week for team members
  • My criteria: application content, contributions to the project (e.g., author order @ UIST), and our current needs (e.g., engineering)
Goal

- Expand this team as I get more research funding
Breaking down barriers

Collaboration
Contributors: our new process

- When you join a milestone on Trello, you are joining an ad-hoc team for the week to pursue that milestone. Immediately go check in via the relevant Slack room.
  - “Hey @channel, I’m joining the task creation milestone this week”

- Then: tell the room whenever you’re starting, and whenever you’re pausing. This will prevent you from working on out-of-date items.
  - “Hey @channel, I’m going to work on the heuristic evaluation for the next two hours. Shout if I shouldn’t!”
DRIs: our new process

- DRIs are responsible for...
  - Organizing any ad-hoc hangouts or hackathons to make sure that everyone who is in the channel knows how to contribute.
  - Posting in #announcements by Friday 5pm each week: an update on their team’s progress. Describe what each team member did.
    - Michael will use this for weekly slides and for recommendation letters.
Phew.
This week’s milestones
Research engineering

- Task completion completely working
  - DRI: @aginzberg
- Worker task submission working
  - DRI: @dmorina
- Monitoring page working
  - DRI: @ryosuzuki and @neilthemathguy
Homepage

- Let’s get a final homepage design
  - DRI: @karolina
User research

- Great job! We’re going to be working on integrating your suggestions.

- Let’s pause further efforts here until we revise the task creation workflow etc.
Open governance

- Run the election!
  - First goal: figure out what the role of this group should formally be…
  - DRIs: @trygve and @acosette
Reputation

- This is our next research foundation! Let’s get moving.
- Two goals:
  - Read relevant papers
  - Study what other platforms (AMT, Upwork, Freelancer) do for reputation
- Make a report back to us on the state of the art

- DRI: @arichmondfuller and @dilrukshi