Jaeyoon Song

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INTERESTS Crowdsourcing, Online Discussion, Computer-Supported Cooperative Work, Future of Work.

EDUCATION

Seoul National University, Seoul, Korea, Republic of — Mar 2016 – Present

- B.B.A., Business Administration
- Computer Science and Engineering (Minor)

RESEARCH EXPERIENCE

KAIST Interaction Lab, Korea Advanced Institute of Science and Technology — Dec 2018 – Feb 2019,

- Undergraduate Research Intern — Jun 2019 – Aug 2019
  - Supervisor: Prof. Juho Kim
  - Project: SolutionChat - Real-time Moderator Support for Chat-based Structured Discussion
  - Project: SuggestBot - Crowdsourcing Evidence for Debate using Amazon Mechanical Turk
  - Project: Credibility Assessment and Critical Thinking through Microtasks while Reading

Human-Computer Interaction Lab, Seoul National University — Jun 2018 – Aug 2018

- Undergraduate Research Intern
  - Supervisor: Prof. Jinwook Seo
  - Project: SoundGlance - Briefing the Glanceable Cues of Web Pages for Screen Reader Users

RESEARCH PROJECTS

PAPERS UNDER REVIEW

[1] S. Lee, J. Song, S. Park, J. Kim, J. Kim, and E. Ko, **SolutionChat: Real-time Moderator Support for Chat-based Structured Discussion**, submitted to *ACM CHI Conference on Human Factors in Computing Systems 2020 (CHI 2020).*

Online chat is an emerging channel for discussing community problems. It is common practice for communities to assign dedicated moderators to maintain a structured discussion and enhance the problem-solving experience. However, due to the synchronous nature of online chat, moderators face a high managerial overhead in tasks like discussion stage management, opinion summarization, and consensus-building support. As such, SolutionChat assists moderators with facilitating a structured discussion for community problem-solving. With SolutionChat, we envision untrained moderators to effectively lead chat-based discussions of important community matters.

[2] D. Shin, J. Song, S. Song, J. Park, J. Lee and S. Jun, **TalkingBoogie: Collaborative Mobile AAC System for Non-verbal Children with Developmental Disabilities and Their Caregivers**, submitted to *ACM CHI Conference on Human Factors in Computing Systems 2020 (CHI 2020).*

Augmentative and alternative communication (AAC) technologies are widely used to help non-verbal children enable communication. For AAC-aided communication to be successful, caregivers should support children with consistent intervention strategies in various settings. TalkingBoogie supports caregivers to effectively collaborate with one another and create a shared understanding of intervention strategies.

WORK IN PROGRESS

[3] **Credibility Assessment and Critical Thinking through Microtasks while Reading**, advised by Prof. Juho Kim

Fact-checking systems using artificial intelligence (AI) tend to focus on performance, while often neglecting their interactions with people. Although improving the predictive accuracy of ML models is a worthwhile goal, engaging humans into the decision making process is equally important for such approach to be sustainable and scalable. This project aims to design a crowdsourcing system where the readers and AI models can collaboratively identify misinformation in online news articles. To make this happen, we have two research questions in mind: (1) How to co-optimize the maximization of system-side information gain and user-side engagement gain? and (2) How to motivate readers to engage in more tasks?

PUBLICATIONS

POSTERS

[4] J. Song, K. Choe, J. Jo, and J. Seo, **SoundGlance: Briefing the Glanceable Cues of Web Pages for Screen Reader Users,** *ACM CHI Conference on Human Factors in Computing Systems (CHI 2019 Late Breaking Work)*, ACM, New York, NY, USA, May 2019.

Although screen readers can convey the textual information or structural properties of a web page, they cannot deliver its overall impression. Such a limitation hinders blind web users from obtaining an overview of the website, which non-blind people can do in a short time. SoundGlance is a novel application that briefly delivers an auditory summary of web pages. SoundGlance supports the screen reader users by converting the important glanceable cues of the pages into sound. To automatically extract the glanceable cues, we trained a convolutional neural network (CNN) with the annotations on the screenshots of 39 web pages.

JOURNALS

[5] J. Song and C. Kim, **What Is Needed for the Sustainable Success of Open Source Software Projects: Efficiency Analysis of Commit Production Process via Git**, *Sustainability* (SCIE/SSCI), vol. 10, no. 9, Aug 2018.

What is needed for open source software projects to be efficient? Linus' Law celebrates the 'many eyeballs' as a key advantage of open source projects. Nevertheless, when it comes to efficiency, 'many eyeballs' could be a double-bladed sword. By mining and analyzing the data of 34 projects on GitHub, this paper performed data envelopment analysis (DEA) to investigate the efficiency of open source projects.

RELEVANT COURSEWORK

Seminar in Organizational Behavior, Dept. of Business Administration — 2019 Spring

- Graduate-level course that required reading 40 journal articles in total, writing a research proposal every week, and reviewing the proposals of other students during the class discussion. (Final grade: A0)

Organizational Psychology, Dept. of Psychology — 2019 Spring

- Major theories and issues in the field of organizational psychology. (Final grade: A+)

HCI and Communication, Dept. of Communication — 2018 Fall

- Topics in robot journalism, human-robot interaction, and social computing. (Final grade: A+)

Human-Computer Interaction, Dept. of Computer Science and Engineering, — 2018 Spring

- Introduction to HCI and information visualization. (Final grade: A+)

SCHOLARSHIPS

Yangyoung Foundation Scholarship 2018 – Present

- Based on both merit and need.

Samsung Convergence Software Course Scholarship Jun 2018

- Scholarship for successfully finishing the Samsung Convergence Software Course (SCSC) program.

Eminence Scholarship (Full), Seoul National University 2016 – 2017

- Merit-based.

HONORS & AWARDS

Undergraduate Research Grant, Seoul National University Mar 2019

- Granted by SNU Undergraduate Research Program (URP).
- Topic: Supporting caregivers to collaborate on AAC intervention strategies.

Outstanding Research Award, Seoul National University Mar 2019

- Awarded by Student-Directed Education (SDE) program.
- Topic: What is needed for the sustainable success of open source software projects?
- Individual work

Top Ten Finalist, Samsung AI Challenge Sep 2018

- Awarded by Samsung Research
- Topic: Restaurant recommendation service
- My role in the team: front-end engineering

Grand Prize, Undergraduate Research Presentation Competition May 2018

- Awarded by Korean Production & Operations Management Society (KOPOMS).
- Topic: Two-stage data envelopment analysis (DEA) on open source software projects
- Individual work

Top Ten Winner, Annual Likelion Ideathon Jul 2017

- Awarded $1,000 AWS credits by Likelion and Amazon Korea.
- Topic: An idea of 'Music of Bullshit,' an online platform where users can collaboratively compose music with any kind of nonsense sound.
- Individual work

Final Winner, SNU School Service Development Tournament Feb 2017

- Awarded by SNULife–an online student community of Seoul National University.
- Topic: Shashagungun, a web platform that gathers posters of various school events.
- My role in the team: Team leader and front-end engineering

WORK EXPERIENCE

Chartmetric, Intern, Front-end Engineering Aug 2017 – Nov 2017

- Chartmetric is a startup based in Palo Alto, providing tools to track, measure, and analyze music big data.
  At Chartmetric, I worked on front-end engineering and data visualization.

BigPearl, Founding member, Front-end Engineering Mar 2017 – Jul 2017

- BigPearl is a MarTech startup that support advertisers to search for influencers and run ad campaigns.
  At BigPearl, I participated in both business planning and front-end engineering.

CLUB ACTIVITIES

Likelion, Web Programming Club, Seoul National University Mar 2016 – Jun 2018

- In Likelion, I tutored peer students on basic web programming.

OTHER PROJECTS

SuggestBot, Kixlab project — Dec 2018 – Feb 2019

- A crowdsourcing interface, developed with Ruby on Rails, that collects evidence of a piece of online discussion from IAC dataset.

Real-time Annotation for Video Chat through Collaborative Tagging — Dec 2018 – Feb 2019

- Inspired by Tilda (Zhang et al., 2018), this project designed a system that summarizes a video chat in real-time using the annotations collaboratively created by the chat participants.

Six Degrees of Jaeyoon Song, Individual assignment for 'Design Thinking' class — Oct 2018 – Nov 2018

- A visualization using d3.js in order to check whether the concept of 'six degrees of Kevin Bacon' also applies to my relationships on Facebook.

Are Refugees Dangerous?, Individual assignment for 'Design Thinking' class — Oct 2018 – Nov 2018

- An infographic indicating what people think, what data say, and what media highlight about refugees.

Korean Independence Movement, Team assignment for 'HCI' class — May 2018 – Jun 2018

- A visualization of Korean Independence Movement created by d3.js.

The Cube, Personal project — Oct 2017 – Nov 2017

- My previous portfolio website to work as a freelance UX engineer.

Shashagungun, Personal project — Dec 2016 – Feb 2017

- A web platform using Ruby on Rails that gathers posters of various school events.

SKILLS

LANGUAGES

- Korean: Native proficiency.
- English: Full professional proficiency.
  - GRE - Verbal 164 / Quantitative 170 / Writing 4.5 (Oct 2019)
- Japanese: Intermediate (reading); basic (speaking, writing).
  - JLPT - N2 (Jan 2014)

PROGRAMMING

- **JavaScript** (D3.js, React.js, TweenLite.js, jQuery, ...)
- Ruby on Rails, SASS/SCSS
- Python, Java, C++

OTHERS

- Sketch App, Adobe Photoshop.
- LaTeX, Microsoft Word, Microsoft Excel, Microsoft PowerPoint.

[*CV compiled on 2019-12-01*]