## HEERYUNG CHOI

CONTACT Information

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RESEARCH INTERESTS Educational Data Mining

HCI

Learning Science

CSCW

EDUCATION

## University of Michigan, Michigan, United States

2016 - Present

PhD in Information

• Advisor: Christopher Brooks

## Seoul National University, Seoul, South Korea

2014 - 2016

Master of Science in Cognitive Science (expected graduation date: Aug. 2016)

• Advisor: Joonhwan Lee

# Seoul National University, Seoul, South Korea

2009 - 2014

Bachelor of Arts in English Education

• Overall GPA: 3.99 / 4.3 (Summa Cum Laude); Upper Division GPA: 4.06 / 4.3

## RESEARCH EXPERIENCES

# Research Assistant for Neolab Pen Computing Project

2014 - Present

- Evaluated user interfaces of collaborative software for the classroom, Neolab N School Note.
- Conducted semi-structured interviews to grasp how the pen computing technology can enhance interactive learning processes.

# Research Assistant for Kinetic Typography Project

2014 - Present

- Established a text-processing algorithm for an automated kinetic typography engine (KIWEE).
- Performed semi-structured interviews and experiments in order to evaluate the validity of the KIWEE system.

## TEACHING EXPERIENCES

#### **Teaching Assistant** for Information Visualization (211.724A-001)

Fall 2015

- Offered general support and one-to-one assistance for graduate students.
- Prepared data for student visualization assignment.
- Assisted the professor in the management of students.

## **Teaching Assistant** for HCI Theory and Practice (2114.408A-001)

Spring 2015

- Showed undergraduate students how to use eye-tracker for their final projects.
- Helped the professor in the management of students.

# Pre-service Teacher at Seoul National University Middle School

2013

- Taught English to 39 ninth-grade students.
- Mentored 7 ninth-grade students on their school lives and future plans.
- Planned daily lessons, including objectives, procedures, and materials.
- Facilitated collaborative work, such as group task and group debate.

# Teaching Volunteer

• Taught disadvantaged eleventh-grade students English.

2013 2009

• Taught disadvantaged elementary students English.

#### **PUBLICATIONS**

## Conference Proceedings

Je Seok Lee, **Heeryung Choi**, Joonhwan Lee. 2015. TalkingCane: Designing Interactive White Cane for Visually Impaired People's Bus Usage, in MobileHCI 2015: ACM Conference on Human-Computer Interaction with Mobile Devices and Services.

Joonhwan Lee, Donghwan Kim, Inho Won, Jieun Wee, Yaena Jang, Sooyeon Jang, **Heeryung Choi**. 2015. Sentence-level Kinetic Typography Generating System, in *HCI Korea 2015*, in cooperation with ACM and SIGCHI.

**Translated Abstract**: Kinetic typography (KT) enables users to better convey emotions in text-based communication. In this research, we propose a sentence-level KT system that generates and assigns effects to the text input. We believe that our system improves the utilization of KT for broader applications. The system consists of 5 steps, and we focused on creating an algorithm for automated processing and layout of text, as in a sentence.

Joonhwan Lee, Donghwan Kim, Inho Won, Jieun Wee, Yaena Jang, Sooyeon Jang, **Heeryung Choi**. 2014. Evaluating System-Generated Kinetic Typography Effects for Sentence-Level Text Layout, in *The Korean Institute of Information Scientists and Engineers 2014*.

Translated Abstract: Kinetic typography effectively allows texts, which lack non-verbal evidence, to show emotion through movement when used in communication. Previous studies have focused on word-for-word modules, whereas this study focuses on the capability and usefulness of sentences. Specifically, an automated algorithm was created for this study, wherein sentences were given animated effects using an appropriate layout. Tests were performed using samples created with the prototype. The results confirmed that sentence-based kinetic typography is appropriate in conveying emotion.

Joonhwan Lee, Donghwan Kim, Inho Won, Jieun Wee, Yaena Jang, Sooyeon Jang, **Heeryung Choi**. 2014. The Architecture of Automatic Kinetic Typography Effects Generating System, in *Korea Multimedia Society 2014*.

**Translated Abstract**: Kinetic typography can be used to reveal emotion successfully in a mediated communication environment. Previous kinetic typography research limits animated effects to word-for-word modules. To support various text-based communication, there is a need for a sentence-based system. Therefore, this study suggests a new algorithm and system wherein an animated effect for kinetic typography is created for sentences.

### PATENTS

Automatic Kinetic Typography Effects Generating System for Expressing Emotions. Joonhwan Lee, Donghwan Kim, Jieun Wee, Yaena Jang, Sooyeon Jang, **Heeryung Choi**. (Pending)

# Honors and Awards

## Samsung Scholarship

2016 (Accepted)

• Tuition and living costs covered for PhD studies (\$50 K per year, for 5 years)

#### National Research Scholarship

2015

• Tuition covered (for one year)

#### Summa Cum Laude

2014

- Graduated with honors (summa cum laude)
- Achieved third-highest GPA of all students in the program

# Seoul National University Scholarship

2011 - 2013 (3 semesters)

• Merit-based scholarship

# ACTIVITIES & SERVICES

# Machine Learning Seminar Led by Professor Joonhwan Lee

2015

• Machine learning seminar in R

#### Reviewer

• CHI 2015 Conference

# Student Volunteer

• CHI 2015 Conference, CSCW 2015 Conference, CHI 2015 PC Meeting

# Coursera Global Translator (Volunteer)

2014 - Present

• Coursera Global Translator Community

# Project Member, Project Manager

2011 - 2013

• Seoul National University Enactus (Student-led non-governmental organization)

## Volunteering Team Leader

2009 - 2010

• Happy Move Global Volunteer Youth Program

# SKILLS AND EXPERTISE

#### Teacher's Certificate

• Secondary School Teaching Certificate (Grade 2) of English language

## User-Centered Design Research

• Eye-tracking, survey distribution, individual interviews, prototyping, contextual inquiry

# **Programming Languages**

• Python, Ruby on Rails, R

# REFERENCES

Christopher Brooks, Ph.D. Research Assistant Professor, School of Information, University of Michigan brooksch@umich.edu

Joonhwan Lee, Ph.D.
Associate Professor,
Department of Communication,
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