

Minsuk Chang

minsuk@minsukchang.com | minsukchang.com

Research Interests

Developing computational techniques for understanding the compositionality of user tasks from sequential behavioral data as design materials for user interfaces.

Education

Korea Advanced Institute of Science and Technology (KAIST) , Daejeon, South Korea	2014 Mar –
PhD in Computer Science, Advisor: Juho Kim	
Rutgers, The State University of New Jersey , New Brunswick, NJ, USA	2012 - 2014
MSc in Statistics	
KAIST Business School, Graduate School of Finance , Seoul, South Korea	2009 - 2011
MSc in Finance with specialization in Financial Engineering, Advisor: Jangkoo Kang	
Thesis Title: An Empirical Study on the Existence of Momentum Profits in Asian Stock Markets	
- 2011 Best Thesis Award	
Simon Graduate School of Business, University of Rochester , Rochester, NY, USA	2010
MSc in Finance - Dual Degree Program with KAIST Business School	
Korea Advanced Institute of Science and Technology (KAIST) , Daejeon, South Korea	2003 - 2008
BSc in Computer Science	

Selected Publications

Under Review. "Workflow Graphs: A Computational Model of Collective Task Strategies for 3D Design Software"

Under Review. "SolveDeep: Supporting Subgoal Learning for Both Learners and Instructors"

Minsuk Chang, Anh Truong, Oliver Wang, Maneesh Agrawala, Juho Kim. "How to Design Voice Based Navigation for How-To Videos" Proceedings of the SIGCHI Conference on Human Factors in Computing Systems, 2019.

Minsuk Chang, Leonore V. Guillain, Hyeungshik Jung, Vivian M. Hare, Juho Kim, and Maneesh Agrawala. "RecipeScape: An Interactive Tool for Analyzing Cooking Instructions at Scale" Proceedings of the SIGCHI Conference on Human Factors in Computing Systems, 2018

Employment

Microsoft AI + Research , Redmond, WA, USA	2019 June - Sept
Research Intern, Information and Data Sciences Group	
- Investigating techniques for recovering from conversational interaction failures	
- Designing and building dialogue state managers to support conversational interfaces for exploratory information retrieval tasks	
Autodesk Research , Toronto, ON, Canada	2018 Nov – 2019 Apr
User Interface Research Intern, User Interface Group	
- Investigating techniques for modeling user demonstrations to capture semantic subgoals	
- Building data-driven interfaces by utilizing different streams of user interaction trace	

Adobe Research, Seattle, WA, USA

2018 Jun - Sept

Summer PhD Intern, Creative Intelligence Lab

- Building novel conversational interaction techniques for video interfaces.
- Understanding and designing voice user interactions for learning with how-to videos.

Coastal Management LLC, New York, NY, USA

2012 - 2013

Primary Role: Quant Research

- Researching, modeling and developing alpha generation strategies for arbitrage trade (US Equity)
- Researching trading signals in statistical arbitrage and index arbitrage models, high-mid frequency models.

KAIST Artificial Intelligence and Pattern Recognition Lab, Daejeon, South Korea

2008

Undergraduate Research Intern - Advisor: Professor Jin-Hyung Kim

Topics in Pattern Recognition for Motion Pictures (Live Video Stream)

Designed and implemented a real-time program that reads the video input of a canoe race and outputs race result.

Project sponsored by the Korea Canoe Federation.

KAIST Artificial Intelligence and Pattern Recognition Lab, Daejeon, South Korea

2007

Undergraduate Research Intern - Advisor: Professor Kee-Eung Kim

Topics in Multiple View Geometry in Computer Vision, Pattern Recognition

Designed and implemented algorithms that recognizes features points in images and detects specific objects in multiple images.

Teaching

Korea Advanced Institute of Science and Technology (KAIST), Daejeon, South Korea

2015 – 2018

Head Teaching Assistant

- CS101 Introduction to Programming

Rutgers, The State University of New Jersey, New Brunswick, NJ, USA

2012 - 2012

Teaching Assistant, Financial Statistics and Risk Management Program

- FSRM588 Financial Data Mining
- FSRM587 Advanced Simulations Methods for Finance

Academic Services

Organizing Committee

ISS 2019 Video Chair

Program Committee

GI 2020

WWW 2020

CHI 2019 LBW

Reviewer

CHI 2017, 2018, 2019, 2020, 2020 LBW

CSCW 2018, 2019, 2020 (Outstanding Review Award)

UIST 2017, 2018

MobileHCI 2019

Student Volunteer

CHI 2017

UIST 2017, 2018