

JA YOUNG LEE

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EDUCATION

- Ph.D., Industrial and Systems Engineering** Jun 2014 – May 2018 (expected)
University of Wisconsin-Madison, Madison, WI
Minor: Computer Science
Advisor: Prof. John D. Lee
- M.S., Industrial and Systems Engineering** Aug 2012 – May 2014
North Carolina State University, Raleigh, NC
Minor: Cognitive Science
GPA: 4.00/4.00
Advisor: Prof. Chang S. Nam
- B.S., Industrial Engineering** Mar 2008 – Feb 2012
Seoul National University, Seoul, South Korea
GPA: 3.80/4.30, graduated *Cum Laude*

AREA OF EXPERTISE

Cognitive engineering, multitasking, modeling human behavior, user experience design and evaluation, human-computer interaction

GRADUATE LEVEL COURSEWORKS

Applied Stochastic Models in Industrial Engineering	Human-Computer Interaction
Artificial Intelligence	Data Visualization
Automated Learning and Data Analysis	Human Factors Engineering Design and Evaluation
Cognitive Engineering Methods and Models	Human Factors Systems Design
Design and Human Disability and Aging	Transportation Safety Engineering
Design Thinking: Innovation and Implementation	Visual Perception

RELEVANT EXPERIENCE

- Human Factors Engineer Intern, Apple Inc.**, Cupertino, CA May 2017 – Present
- Designed and evaluated human-machine interface through multiple rapid user testing sessions
- Research Assistant, Cognitive Systems Lab.**, Univ. of Wisconsin-Madison, Madison, WI Jun 2014 – Present
- Estimated crash risk and injury risk of different in-vehicle voice control interfaces using SHRP2 naturalistic driving data and counterfactual simulation
 - Extended Distract-R driver model for rapid prototyping (distractr.engr.wisc.edu) and created interactive visualization tool to assess the safety of interface design (jylee.shinyapps.io/glanceViz_v3)
 - Developed a web application that calculates visual search time for in-vehicle system interface designers (distraction.engr.wisc.edu)
- Research Assistant, HCI Lab.**, North Carolina State Univ., Raleigh, NC Aug 2012 – May 2014
- Applied machine learning methods to classify emotional categories from electroencephalography features
 - Designed three experiments of haptically enhanced virtual environment for visually impaired students
 - Developed LabVIEW programs that collect EEG signals and extract brain activity features
 - Programmed feature selection modules and classifiers for brain-computer interface for paralyzed patients

Research Assistant, Consumer Trend Center, Seoul National Univ., Seoul, Korea Nov 2011 – Jun 2012

- Collected and analyzed ongoing consuming trends in Korea to inform business models
- Used qualitative research methods to extract engineering trends for a book ‘Trend Korea 2012’

Research Assistant, UBS Securities Pte. Ltd., Seoul, Korea Dec 2010 – Feb 2011

- Collected data for research reports and translated Korean-English business documents

TECHNICAL SKILLS

Programming language: R, Java, Python, MATLAB, LabVIEW

Statistical packages: SPSS, JMP

JOURNAL PUBLICATIONS

- Lee, J. Y., Lee, J. D. (in prep) Modeling the Effect of Task Structure on Driver Glance Behavior, *Human Factors*
- Venkatraman, V., Lee, J. Y., Lee, J. D., Schwarz, C. W., Brown, T. L. (in prep) Safety benefits estimations: Do differences in associations between driver model parameters matter? *Accident Analysis and Prevention*
- Lee, J. Y., Lee, J. D., Bärghman, J., Lee, J., Reimer, B. (under revision) What is the socially acceptable level of risk of distracted driving? *Accident Analysis and Prevention*
- Lee, J. Y., Lindquist, K. A., Nam, C.S. (2017) Emotional granularity effects on event-related brain potentials during affective picture processing. *Frontiers in Human Neuroscience*, 11, 133.
- Lee, J. Y., Bahn, S., & Nam, C. S. (2014). Use of reference frame and movement pattern in haptically enhanced 3D virtual environment. *International Journal of Human-Computer Interaction*, 30(11), 891-903.

CONFERENCE PROCEEDINGS

- Lee, J. Y. & Lee, J. D. (Sep 2017). Multilevel Analysis of Distracted Drivers’ Glances: Enhancing the Robustness of the NHTSA Acceptance Criteria. *To be presented at the 2016 International Annual Meeting of the Human Factors and Ergonomics Society*, Austin, TX, USA.
- Lee, J. Y. & Lee, J. D. (Jun 2017). Modeling The Effect of Task Structure on Driver Glance Behavior. *To be presented at the 9th International Driving Symposium on Human Factors in Driver Assessment, Training and Vehicle Design*, Manchester Village, VT, USA. (Received Honda Outstanding Student Paper Award)
- Venkatraman, V., Lee, J. Y., Lee, J. D., McLaurin, E., Payyanadan, R., Schwarz, C., Brown, T. (Jan 2017). Collision Warning Benefits Estimation: Do Differences in Driver Models Matter? *Presented at 2017 Transportation Research Board*, Washington, DC, USA.
- Lee, J. Y., Lee, J., & Lee, J. D. (Sep 2016). A Visual Search Model for In-Vehicle Interface Design. *Presented at the 2016 International Annual Meeting of the Human Factors and Ergonomics Society*, Washington, DC, USA. (Top 5 Student Papers, Surface Transportation Technical Group)
- Lee, J. Y., Gibson, M. C., & Lee, J. D. (May 2016) Error recovery in multitasking while driving. *Presented at 2016 Annual SIGCHI Conference: Human Factors in Computer Systems*, San Jose, CA, USA. (23.4% accepted)
- Lee, J. Y., Lindquist, K. A., & Nam, C. S. (Oct 2015). Predicting emotional intelligence with EEG coherence. *Presented at 2015 International Annual Meeting of the Human Factors and Ergonomics Society*, Los Angeles, CA, USA.
- Lee, J. Y., Gibson, M., & Lee, J. D., (Sep 2015). Secondary task boundaries influence drivers' glance durations. *Presented at the 7th International Conference on Automotive User Interfaces and Interactive Vehicular Applications*, Nottingham, UK. (53% accepted)
- Lee, J. Y. & Lee, J. D. (Jun 2015). A web-based evaluation tool to predict long eye glances. *Presented at the 8th International Driving Symposium on Human Factors in Driver Assessment, Training and Vehicle Design*, Salt Lake City, UT, USA.
- Lee, J. Y., Bahn, S., & Nam, C. S. (Jul 2013). Use of reference frame in haptic virtual environments: Implications for users with visual impairments. *Presented at the 15th International Conference on Human-Computer Interaction*, Las Vegas, NV, USA.

AWARDS AND SCHOLARSHIPS

Honda Outstanding Student Paper Award	Jun 2017
Human Factors and Ergonomics Society (HFES) 2015 Student Member with Honors	Oct 2015
Human Factors and Ergonomics Society (HFES) First-Year Student Travel Honorarium (value \$500)	Oct 2014
Excellence in Leadership, Lee Chung Han Award, Seoul National University (value \$2,000)	Jun 2011
National Scholarship for Science and Engineering	2010 – 2011
Seoul National University Development Fund Scholarship	2009
Superior Academic Performance Scholarship	2008 – 2009

ACADEMIC SERVICES

Ad hoc reviewer for the Accident Analysis and Prevention	2017
Ad hoc external reviewer for the ACM CHI 2017	2017
President, UW-Madison Student Chapter of HFES, Madison, WI	May 2016 – Present
Vice President, UW-Madison Student Chapter of HFES, Madison, WI	Jan 2016 – May 2016
Finance Chair, UW-Madison Student Chapter of HFES, Madison, WI	Sep 2015 – Dec 2015
Web Master, UW-Madison Student Chapter of HFES, Madison, WI	Jun 2014 – Aug 2015

OTHER SERVICES

Student volunteer at CHI 2016	May 2016
Student volunteer at HFES annual meetings	2014, 2015, 2016
MAKEwithMOTO 48 Hours Make-a-thon Project, Raleigh, NC	Aug 2013
SNU Student Ambassador, Seoul National University, Seoul, Korea	Mar 2010 – Dec 2010
Project Manager, The Industrial Engineers' Night, Seoul National University, Seoul, Korea	Mar 2009 – Jun 2011
Volunteer at Bangbae Welfare Center Baking School, Seoul, Korea	Mar 2009 – Dec 2009

Last updated: Oct 9, 2017