

Bongjun Kim

2133 Sheridan Road, Ford 3.202, Evanston, Illinois, USA
bongjun@u.northwestern.edu • <http://www.bongjunkim.com>

EDUCATION	Ph.D. candidate in Computer Science 2013 – present Interactive Audio Lab (Advisor: Bryan Pardo) Northwestern University, Evanston, IL, USA
	M.S. in Culture Technology 2012 Audio and Interactive Media Lab (Advisor: Woon Seung Yeo) Korea Advanced Institute of Science and Technology (KAIST), Korea
	M.S. in Industrial Engineering 2009 Industrial Informatics Lab (Advisor: Kiejin Park) Ajou University, Suwon, Korea
	B.S. in Industrial and Information System Engineering 2007 Ajou University, Suwon, Korea (Study Abroad, Lulea University of Technology, Lulea, Sweden) Aug 2006 – Dec 2006
RESEARCH INTEREST	Machine Learning - interactive machine learning, deep learning, active learning Audio Signal Processing - sound event recognition, audio/music information retrieval Human Computer Interaction - a human-in-the-loop interface, digital musical instrument
RESEARCH EXPERIENCE	Research Assistant Northwestern University, IL, USA Sep 2013 – present <ul style="list-style-type: none">▪ Audio search by vocal imitation using deep learning (Dec 2016 – present)▪ Interactive sound event detection and annotation (Sep 2015 – present)▪ Speeding learning of personalized audio equalization (Sep 2013 – Jun 2015)
	Research Intern Gracenote, CA, USA Jun 2017 – Sep 2017 <ul style="list-style-type: none">▪ Audio Compression Identification
	Research Assistant KAIST, Korea Sep 2010 – Aug 2012 <ul style="list-style-type: none">▪ Mobile media as a musical instrument
TEACHING EXPERIENCE	Teaching Assistant Fall, 2017 EECS-349 Machine Learning Northwestern University, IL, USA
	Teaching Assistant Fall, 2016 EECS-349 Machine Learning Northwestern University, IL, USA
	Teaching Assistant Fall, 2015 EECS-349 Machine Learning Northwestern University, IL, USA
	Teaching Assistant Fall, 2014 EECS-349 Machine Learning Northwestern University, IL, USA
	Teaching Assistant Fall, 2012 GCT-633 Audio and Multimedia Programming KAIST, Korea

PUBLICATIONS

- Bongjun Kim and Bryan Pardo, "A Human-in-the-loop System for Sound Event Detection and Annotation," ACM Transaction on Interactive Intelligent System (TiIS). (Accepted).
- Bongjun Kim, "Leveraging User Input and Feedback for Interactive Sound Event Detection and Annotation," Student Consortium, ACM International Conference on Intelligent User Interfaces (IUI) 2018.
- Bongjun Kim and Bryan Pardo, "I-SED: an Interactive Sound Event Detector," ACM International Conference on Intelligent User Interfaces (IUI), Limassol, Cyprus, Mar. 2017
- Bongjun Kim and Bryan Pardo, "Interface Design for Interactive Sound Event Detection," Workshop on Awareness Interface and Interaction (AWARE) at the ACM International Conference on Intelligent User Interface (IUI), Limassol, Cyprus, Mar. 2017
- Bongjun Kim and Bryan Pardo, "Speeding Learning of Personalized Audio Equalization," International Conference on Machine Learning and Applications (ICMLA), Detroit, USA, Dec. 2014
- Bongjun Kim and Bryan Pardo, "Adapting Collaborative Filtering to Personalized Audio Production," AAAI Conference on Human Computation and Crowdsourcing (HCOMP), Pittsburgh, USA, Oct. 2014
- Bongjun Kim and Woon Seung Yeo, "Probabilistic Prediction of Rhythmic Characteristics in Markov Chain-based Melodic Sequences," International Computer Music Conference (ICMC) Aug. 2013
- Seunghun Kim, Bongjun Kim, and Woon Seung Yeo, "IAMHear: A Tabletop Interface with Smart Mobile Devices using Acoustic Location," Conference on Human Factors in Computing Systems (CHI) works in progress, Apr. 2013
- Bongjun Kim and Woon Seung Yeo, "Interactive Mobile Music Performance with Digital Compass," In Proceedings of the International Conference on New Interfaces for Musical Expression (NIME), Ann Arbor, USA, 2012.
- Minkoo Kang, Kiejin Park, and Bongjun Kim, "A Scheduling Algorithm for Reducing FlexRay Message Response Time using Empty Minislots in Dynamic Segment," Digest of Technical Papers, International Conference on Consumer Electronics (ICCE), USA, 2010.
- Minkoo Kang, Kiejin Park, and Bongjun Kim, "A Static Message Scheduling Algorithm for Reducing FlexRay Network Utilization," IEEE International Symposium on Industrial Electronics, pp. 1287-1291, Seoul, Korea, 2009.
- Bongjun Kim and Kiejin Park, "Probabilistic Delay Model of Dynamic Message Frame in FlexRay Protocol," IEEE Transaction on Consumer Electronics, Vol. 55, Issue 1, pp. 77-82, Feb. 2009.
- Bumjoo Park, Kiejin Park, and Bongjun Kim, "A Performance Isolation Mechanism Based on Fuzzy Technique for Web Server Loading Balancing," The Institute of Electronics, Information and Communication Engineers Transactions on Communications, Vol.E92-B, No.4, pp. 1086-1093, Apr. 2009.
- Bongjun Kim and Kiejin Park, "Analysis of Frame Delay Probability in the FlexRay Dynamic Segment," The 6th IEEE International Conference on Industrial Informatics, pp. 1519-1522, Daejeon, Korea, 2008.
- Minkoo Kang, Kiejin Park, and Bongjun Kim, "PDO Packing Mechanism for Minimizing CANopen Network Utilization," The 34th Annual Conference of the IEEE Industrial Electronics Society, pp.1516-1519, Nov. 2008.
- Minkoo Kang, Kiejin Park, and Bongjun Kim, "Determining the Size of a Static Segment and Analyzing the Utilization of In-vehicle FlexRay Network," Third International Conference on Convergence and Hybrid Information Technology, Vol. 2, pp.50-53, Nov. 2008.

ACADEMIC AWARDS

The NSF Travel Grant 2017
ACM International Conference on Intelligent User Interfaces (IUI) 2017

Segal Design Cluster Fellowship 2015 – 2016
Northwestern University, IL, USA

	Outstanding Teaching Assistant Award	2012
	GCT633 Audio and Multimedia Programming Korea Advanced Institute of Science and Technology (KAIST), Korea	
	Best Presentation and Paper Award	2008
	IEEE International Conference on Industrial Informatics	
TALKS	“Interactive Intelligent user interfaces for Music and Audio” HCI@KAIST Seminars, KAIST, Korea	Mar 2018
	“Interactive Intelligent user interfaces for Music and Audio” Music and Audio Computing Lab., Culture Technology, KAIST, Korea	Mar 2018
	“Interactive Intelligent user interfaces for Music and Audio” Ewha Arts & Science Institute, Ewha Womans University, Korea.	Mar 2018
	“A Human-in-the-loop System for Sound Event Detection and Annotation” Haii:Human-AI-Interaction, inc., Yonsei University, Korea	Mar 2018
	“I-SED: an Interactive Sound Event Detector” Simons Institute Workshop on Interactive Learning, Berkeley, CA, USA	Feb 2017
	“I-SED: an Interactive Sound Event Detector” Gracenote, Emeryville, CA, USA	Feb 2017
PROFESSIONAL EXPERIENCE	Research Engineer Research process innovation and product lifecycle management Doosan Infracore Co. Ltd, Korea	Jul 2009 – Jul 2010
PERFORMANCE AND EXHIBITION	Mobile music performance: Where Are You Standing? International Conference on New Interfaces for Musical Expression (NIME), Ann Arbor, USA	May 2012
	Interactive sound art installation: Turning Into Sound Daejoen Children Art Gallery, Daejeon, Korea	Jan 2012
	Mobile music performance: ADC Project- Don’t Imagine Arco Art Theater, Seoul, Korea	Aug 2011
	Mobile music performance: Where Are You Standing? Hyundai Card / Capital Inc., Seoul, Korea	Jun 2011
EXTERNAL SERVICES	Conference Reviewer ACM Multimedia Conference IEEE International Conference on Acoustics, Speech, and Signal Processing International Conference on New Interfaces for Musical Expression IEEE Workshop on Applications of Signal Processing to Audio and Acoustics	2016 2015 – 2016 2013 – 2017 2015
	Student Volunteer for Conferences ACM International Conference on Intelligent User Interfaces (IUI), Cyprus International Conference on Design Computing and Cognition, USA	2017 2016
	Conference Staff: Administration International Conference on New Interfaces for Musical Expression (NIME), Korea	2013

- PROGRAMMING
AND SOFTWARE
SKILLS**
- Python, Matlab, Javascript, Processing, SQL
 - Max/MSP, Pure Data
 - Music production tools: Logic Pro, Cubase