# Jean Young Song

Ph.D. Candidate, Electrical Engineering and Computer Science
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**Education**

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| Sep. 2012 - Present | Ph.D. candidate, Electrical Engineering and Computer Science (EECS)<br>**The University of Michigan, Ann Arbor** |
| Sep. 2009 - Aug. 2011 | M.S., Electrical and Electronic Engineering<br>**Yonsei University, Seoul, South Korea** |
| Mar. 2004 - Aug. 2009 | B.S., Electrical and Electronic Engineering (Minor, Psychology)<br>**Yonsei University, Seoul, South Korea** |

**Research Experience**

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| Jan. 2017 - Present | **Graduate Student Research Assistant**<br>**Crowds and Machines (CROMA) Lab, EECS, University of Michigan**<br>- Building a crowdsourcing system to annotate dimension measures of videos to create 3D scene reconstructions |
| Aug. 2012 - Apr. 2015 | - Built crowdsourcing tools to help autonomous robots recognize new contexts<br>**Graduate Student Research Assistant**<br>**Digital Image Processing Lab, Department of Radiology, University of Michigan**<br>- 2D/3D non-rigid image registration of microscopy/colonoscopy images of mouse colon polyps |
| Sep. 2009 - Jul. 2011 | - Feature classification for normal/cancerous tissue segmentation of colonic cancer<br>**Graduate Researcher**<br>**Image and Information Lab (IILAB), Yonsei University**<br>- Reducing the bit-rate of the video codec of Next-generation Digital TV Broadcasting System<br>- Reducing the decoder complexity of High Efficient Video Coding(HEVC) Standard |
| Jun. 2008 - Aug. 2009 | - Fine detection of tampered area of an image using watermarking<br>**Undergraduate Research Assistant**<br>**IILAB, Yonsei University** |
| Dec. 2007 - May 2008 | - Implemented the framework of Scalable Video Coding (SVC) Player using MFC programming<br>**Undergraduate Research Assistant**<br>**Center for Signal Processing Research, Yonsei University**<br>- Improved data transfer efficiency for a security camera by designing self-detection algorithms |

**Teaching Experience**

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| Fall 2009 | **Teaching Assistant, Yonsei University, Seoul, South Korea**<br>- EEE2060: Signal and System (Lecturer: Prof. Yoonsik Choe) |

**Conference Papers**

J.Y. Song, R. Fok, J. Kim, W.S. Lasecki. FourEyes: Leveraging Tool Diversity as a Means to Improve Aggregate Accuracy in Crowdsourcing. In ACM Transactions on Interactive Intelligent Systems (TiiS). 2018.

- J.Y. Song, R. Fok, A. Lundgard, F. Yang, J. Kim, and W.S. Lasecki. "Two Tools are Better Than One: Tool Diversity as a Means of Improving Aggregate Crowd Performance", In Proceedings of the ACM International Conference on Intelligent User Interfaces (IUI 2018). Tokyo, Japan.
- J.Y. Song, R. Fok, F. Yang, K. Wang, A. Lundgard, and W. S. Lasecki, "Tool Diversity as a Means of Improving Aggregate Crowd Performance on Image Segmentation Tasks", Workshop on Human Computation for Image and Video Analysis (GroupSight), at the AAAI Conference on Human Computation and Crowdsourcing (HCOMP), 2017.
- S. Gouravajhala, J.Y. Song, J. Yim, R. Fok, Y. Huang, F. Yang, K. Wang, Y. An, W.S. Lasecki. "Towards Hybrid Intelligence for Robotics", In Collective Intelligence Conference (CI 2017). New York, NY.
- J. Y. Song and C. R. Meyer, "2D-3D Image Registration using Thin-Plate Spline and Volume Rendering", SPIE Medical Imaging 2015, Orlando, Feb. 2015.
- J. Y. Song, J. A. Fessler, and C. R. Meyer, "Adaptive Filtering on Conditional Mutual Information for Intermodal Non-Rigid Image Registration", IEEE NSS/MIC 2014, Seattle, Nov. 2014.
- J. Y. Song, H. Jin, and Y. Choe, "Image Tamper Detection Method Based on Data Hiding", Conference 2010 Image Processing and Image Understanding (IPIU), Jeju, South Korea, Jan. 2010. (Written in Korean)
- J. Y. Song, H. Jin, and Y. Choe, "Hash Value Delay Hiding for Image Authentication", EURO-SIAM 2010, Athens, Greece, Dec. 2010.

**Honors & Awards**

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| Mar. 2018 | - Best Student Paper Honorable Mention |
| Jan. 2010 | - Volunteer Honor for distinguished volunteering, the Mayor of Seoul |
| May 2008 | - Undergraduate Creative Research Excellence Award, Yonsei Univ. Dept. of EE |
| Aug. 2005 | - Merit-based Scholarship, Yonsei University |