Sooyong Jang

sooyong.jang@gmail.com

Education

- **University of Pennsylvania**, Philadelphia, PA
  Ph.D.: Computer and Information Science (GPA: 3.97/4.00) — Aug 2018 – May 2024 (anticipated)
  M.S.: Computer and Information Science (GPA: 4.00/4.00) — Graduated: May 2017
- **Seoul National University**, Seoul, South Korea — Graduated: Feb 2013
  Cum Laude (GPA: 3.80/4.30)
  B.S.: Computer Science and Engineering
  B.B.A.: Business Administration
- **Uppsala University**, Uppsala, Sweden — Spring 2010
  Exchange student: Information Technology

Research Experience

- **Ph.D. Student** @ PRECISE Center, University of Pennsylvania, Philadelphia, PA — May 2018 - Present
  - Maintains medical related applications
    - Remotely collecting SpO2 data for Bronchopulmonary Dysplasia (BPD) patients for more than three years
    - Analyzing glucose data for diabetes patients (Paper: Malone et al., 2021)
  - Researches confidence calibration of neural network classifiers
    - Implemented a calibration algorithm using Lossy Label-Invariant transformations (Paper: Jang et al., 2021)
  - Studies sequential Covariate shift detection
    - Developed a sequential covariate shift detection algorithm
- **Undergraduate Research Intern @** BioIntelligence Lab., Seoul National University, South Korea — Sep 2011 – Dec 2012
  - Researched on robot motion generation with a humanoid robot, DARwIn-OP
  - Studied human motion learning with Dynamic Hypernetwork algorithm
- **Visiting Research Student @** Institute for Robotics & Intelligent Machines, Georgia Institute of Technology, Atlanta, GA — Jul 2011
  - Ported the anyKode Marilou Simulator Library (implemented in C++) to Java Using Java Native Access

Work Experience

- **Research Specialist** @ University of Pennsylvania, Philadelphia, PA — Jul 2017 – Jul 2018
  - Developed programs in medical fields
    - A program for analyzing diabetes patients' glucose data
    - A program for handling HL7 format files
- **Teaching Assistant** @ University of Pennsylvania, Philadelphia, PA
  - CIS520 Machine Learning under Dr. Lyle Ungar — Sep 2016 – Dec 2016
  - CIT595 Computer Systems Programming under Dr. Insup Lee — Jan 2021 – May 2021
- **Software Engineer** @ Artificial Intelligence Lab., Crosscert Inc., Seoul, South Korea — Jul 2013 – Dec 2014
  - Designed/developed a robot SDK for a smartphone robot, Tyche
    - Built a locomotion module for Tyche and a two times faster Avatar module than the previous version
    - Integrated vision modules (Face Recognition, Ball Detection, and Marker Detection)
- **Software Engineer** @ Intelligent Robotics Lab., Bonavision Inc., Seoul, South Korea. — Full-Time: Jun 2007 – Jan 2010; Part-Time: Mar 2012 – Jul 2013, Jun 2010 – Aug 2010, Dec 2010 – Feb 2011
  - Developed intelligent Robot Software Platform (iRSP)
    - User Interface based on Eclipse Rich Client Platform
    - Interface between anyKode Marilou 3D simulator and iRSP
  - Integrated Planning Domain Definition Language (PDDL) Planner with iRSP
  - Created UPnP components for devices (iRobot Create, Microsoft Kinect/ASUS Xtion Pro, Sphero) and android apps

Publication

- **Journal Publications**
  1. Susan Kohl Malone, Amy J. Peleckis, Laura Grunin, Gary Yu, **Sooyong Jang**, James Weimer, Insup Lee, Michael R. Rickels, and Namni Goel. "Characterizing Glycemic Control and Sleep in Adults with Long-Standing Type 1 Diabetes and Hypoglycemia Unawareness Initiating Hybrid Closed Loop Insulin Delivery." *Journal of Diabetes Research 2021*, 2021.
  2. Hung Nguyen, **Sooyong Jang**, Radoslav Ivanov, Christopher Bonafide, James Weimer, and Insup Lee. "Reducing pulse oximetry false alarms without missing life-threatening events." *Smart Health*, 2018.
- **Refereed conferences**
  1. **Sooyong Jang**, Insup Lee, and James Weimer. "Improving Classifier Confidence using Lossy Label-Invariant Transformations." In *International Conference on Artificial Intelligence and Statistics*, pp. 4051-4059. PMLR, 2021.

Skills

Programming Language: Java (5+ years industry experience), Matlab, C/C++, C#, Python, Swift, Ruby, R

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DB: MySQL, Mongo DB
Machine Learning library: PyTorch

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