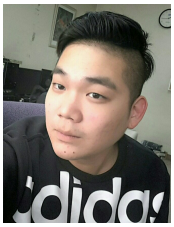
Sang-Il Oh

Personal Data

Date-of-birth	1992/11/12
Nationality:	South Korea
Last education:	M.S., Catholic University of Korea
e-mail:	sean.sangil@gmail.com
Research sample:	Dropbox, Homepage
Language:	Korean (Mothertongue), English (Fluent)
Hobby:	Muay Thai, Scuba-dive, Swimming



Current Position

Junior Developer 2017.09-Now | Selvas AI, Seoul.
Biomedical image processing. Developing computer vision and machine learning algorithms for extracting lesion or cancer from X-ray, ultrasonic and endoscope images.

Previous Position

Invited Researcher 2017.04-2017.09 | Aria Care, Seoul.
Research Worker 2017.06-2017.08 | 5G NW-based AI Convergence System Project (GIGA Korea).

Educations

Feb. 2017 Master of Engineering, **Catholic University of Korea**, Seoul
Major: Media Engineering
Thesis: "A New Multiple Objects Detection and Tracking Algorithms using Multi-Sensor Modality for Intelligent Vehicles" | Advisor: Prof. Hang-Bong Kang

Feb. 2015 Bachelor of Engineering, **Catholic University of Korea**, Seoul
Major: Media Engineering
Advisor: Prof. Hang-Bong Kang

Major Skills and Techniques

- Machine learning, Computer vision, Linear algebra, Statistics
- Object detection, classification, and tracking by using multiple sensors
- Semantic segmentation and Generative model (also fields of GAN)
- Probabilistic mapping and filtering for driving scenes
- Biomedical image processing based on computer vision and machine learning algorithms
- Multiple sensors fusion
- Analyzing and modeling visual perception (emotion-inducing photographs) based on ML
- Caffe and Tensorflow
- MATLAB, C/C++, Python

Academic Experiences

2015-2016 **Teaching Assistant**, Catholic University of Korea
Computer Vision / Pattern Recognition and Machine Learning
Visual Fx / Information Retrieval

Publications

Journal:

2018 **Sang-Il Oh**, and Hang-Bong Kang, "Development and Utilization of a Disgusting Image Dataset to Understand and Predict Visual Disgust", *Image and Vision Computing*(I.F.: 2.671), online available. [URL]

2017 **Sang-Il Oh**, and Hang-Bong Kang, "Multiple Objects Fusion Tracker using a Matching Network for Adaptively Represented Instance Pairs", *Sensors*(I.F.: 2.677), 17(4), 883. [URL]

2017 **Sang-Il Oh**, and Hang-Bong Kang, "Object Detection and Classification by Decision-Level Fusion for Intelligent Vehicle Systems", *Sensors*(I.F.: 2.677), 17(1), 207. [URL]

2016 **Sang-Il Oh**, and Hang-Bong Kang, "Fast Occupancy Grid Filtering Using Grid Cell Clusters From LIDAR and Stereo Vision Sensor Data", *IEEE Sensors Journal*(I.F.: 2.512), 16(19), 7258-7266. [URL]

2015 **Sang-Il Oh**, and Hang-Bong Kang, "A New Method for Measurement and Prediction of Memorability from Logo Images using Characteristics of Color and Shape", *Journal of Korea Multimedia Society*, 18(12), 1509-1518. [URL]

Conferences &Workshops:

2017 **Sang-Il Oh**, and Hang-Bong Kang, "Multiple Object Tracking using Fuzzy Logic for Handling Uncertainty", *The 3rd IEEE International Conference on Cybernetics (CYBCONF)*. [URL]

2017 **Sang-Il Oh**, and Hang-Bong Kang, "A New Object Proposal Generation Method for Object Detection in RGB-D Data", *IEEE International Symposium on Applied Machine Intelligence and Informatics (SAMI)*. [URL]

2015 **Sang-Il Oh**, and Hang-Bong Kang, "A Modified Sequential Monte Carlo Bayesian Occupancy Filter Using Linear Opinion Pool for Grid Mapping", *Proceedings of the IEEE International Conference on Computer Vision Workshops (ICCVW)*. [URL]

Awards and Activities

2015-Present **IEEE Student member**

2017 **Patented Invention, applied**, Republic of Korea
"System And Method For Detecting And Predicting Brain Disease"

2017 **Patented Invention, applied**, Republic of Korea
"Method for Tracking Multi Object"

2017 **Patented Invention, applied**, Republic of Korea
"Object Detection and Classification Method"

2016 **Patented Invention, applied**, Republic of Korea
"Apparatus and Method for Environment Mapping of an Unmanned Vehicle"

2013 **Academic research scholarship** - *Best Research*, Catholic University of Korea
"Development of the blood flow capturing method on the webcam"

Research Projects

2017- **Project Planning for Artificial Intelligent Service based on 5G Network,** *GIGA Korea*

Planning demonstration projects in view of AI services based on 5G network with the KT research team. Investigating and analyzing corresponding markets, also proposing directions for brand new AI services. I am participating to this project as a research staff.

2015-2017 **Development of objects recognition method using probabilistic fusion of multiple sensor modalities for unmanned vehicles, supported by a grant from** *Agency for Defense Development (ADD)*

Development of the probabilistic environment mapping, object detection, classification and tracking algorithms for unmanned vehicles operated on outdoor/difficult terrain by using multi-sensor, such as LiDAR, Radar, and CCD.

2011-2015 **Development of viewing condition adaptive 3D structure authoring tool and rendering process, supported by a grant from** *Ministry of Science, ICT and Future Planning (MSIP)*

Development of the depth adjust method on stereoscopic images to modify the depth values of each object according to characteristics of viewers.

2012-2013 **Development of the over-immersion healing technique in the digital environment, supported by a grant from** *Korea Creative Content Agency (KOCCA)*

Devlopment of a method for real-time blood flow capturing using a webcam.