WONHO BAE

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Research enthusiast with a focus on computer vision, specifically for **self and weakly supervised** learning in **object recognition** framework. Currently pursuing master's degree in Computer Science at UMass and actively conducting a research on weakly supervised object localization task. Looking for a PhD position for Fall 2020.

EDUCATION

University of Massachusetts, Amherst   *Sep 2018 - Present*
Master of Computer Science

University of California, Berkeley   *Sep 2013 - Dec 2017*
Bachelor of Statistics

Santa Monica College   *Sep 2011 - May 2013*
Associate of Economics, member of Alpha Gamma Sigma

RESEARCH EXPERIENCE

Computer Vision Lab at Seoul National University   *Feb 2018 - Present*
Research Intern
- Supervisor: Prof. Gunhee Kim
- Conducted a research on small object detection using Generative Adversarial Network in Faster R-CNN framework.
- Conducted a research on class activation map for weakly-supervised object localization task. Submitted to CVPR2020.

Data Science for Common Good Fellowship at UMass   *May 2019 - Aug 2019*
Research Fellow
- Supervisor: Dr. Brant Cheikes, Prof. Matthew Rattigan
- Conducted a research on classifying wild animal images collected using camera traps in collaboration with The Nature Conservancy. Deployed a web-based open-source tool for ecologists.

Renewable & Appropriate Energy Lab at UC Berkeley   *Jan 2017 - Dec 2017*
Research Assistant
- Supervisor: Prof. Daniel Kammen, Prof. Deborah Sunter
- Participated in the Inclusive Green Growth porject. Worked on keyword detection task using Natural Language Process techniques to replace synonyms and pronouns in the text. Currently writing a book to publish.

PUBLICATIONS

[1] **Wonho Bae***, Junhyug Noh*, Gunhee Kim, "Rethinking Class Activations Maps for Weakly Supervised Object Localization," [Preprint] submitted to CVPR 2020

[2] Junhyug Noh, **Wonho Bae**, Wonhee Lee, Jinhwan Seo and Gunhee Kim, "Better to Follow, Follow to Be Better: Towards Precise Supervision of Feature Super-Resolution for Small Object Detection," in International Conference on Computer Vision (ICCV 2019), Seoul, Korea, Oct 2019

WORK EXPERIENCE

Republic of Korea Army   *Feb 2015 - Nov 2016*
Signals Intelligence Analyst
- Served in the intelligence battalion of the Republic of Korea Army for 21 months as a signals intelligence analyst.

AWARD & SCHOLARSHIP

Data Science for Common Good Fellowship at UMass *May 2019 - Aug 2019*

American Math Competitions *2011 - 2012*
*3*rd place in 2011 and *1*st place in 2012

TEACHING

Grader
Computer Vision (COMPSCI 670) *Fall 2019*

SEMINARS

AI Summer Seminar *Summer 2019*
Hosted AI seminar at UMass during Summer of 2019. Discussed various topics related to AI including but not limited to computer vision, natural language process and planning.

Seminar for Inclusive Green Growth at Institute of Advanced Study, Germany *Aug 2018*
Gave a presentation about a data-driven approach for measuring ecological growth of different countries and regions using Natural Language Process based on literature published so far.

TECHNICAL SKILLS

Programming Language: Python, C++, R, SQL
Deep Learning Tools: Pytorch, Tensorflow