# WONHO BAE

**Computer Vision Researcher**

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## RESEARCH EXPERIENCE

### Research Assistant
**Vision & Learning Lab at Seoul National University**

📅 February 2019 – Present    📍 Seoul, South Korea

- Supervisor: Prof. Gunhee Kim
- Improved the detection performance of small objects using Generative Adversarial Network in Faster R-CNN framework. Published to ICCV2019.
- Revised class activation map for weakly-supervised object localization. Under review for a conference.

### Research Fellow
**Data Science for Common Good Fellowship at UMass**

📅 May 2019 – August 2019    📍 Amherst, Massachusetts

- 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.

### Research Assistant
**Renewable & Appropriate Energy Lab at UC Berkeley**

📅 January 2017 – December 2017    📍 Berkeley, California

- Supervisor: Prof. Daniel Kammen, Prof. Deborah Sunter
- Participated in the Inclusive Green Growth project. Worked on keyword detection task using natural language processing techniques to replace synonyms and pronouns in the text. Currently writing a book to publish.

## WORK EXPERIENCE

### Course Grader
**University of Massachusetts, Amherst**

📅 September 2019 – December 2019    📍 Amherst, MA

- Worked as a grader for the graduate-level computer vision course at UMass, Amherst. Involved in grading and developing assignments for the course.

### Signals Intelligence Analyst
**Republic of Korea Army**

📅 February 2015 – November 2016    📍 Chuncheon, South Korea

- Served in the intelligence battalion of the 2nd Corps of the Republic of Korea Army for 21 months as a signals intelligence analyst.

## PUBLICATIONS

[1] **Wonho Bae**\*, Junhyug Noh\*, Gunhee Kim, "Rethinking Class Activations Maps for Weakly Supervised Object Localization," under review.

[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, Seoul, Korea, Oct 2019.

## EDUCATION

### Master's in Computer Science
**University of Massachusetts, Amherst**

📅 Sep 2018 – May 2020    GPA: 3.83

### Bachelor's in Statistics
**University of California, Berkeley**

📅 Sep 2013 – Dec 2017    GPA: 3.75

### Associate's in Economics
**Santa Monica C College**

📅 Sep 2011 – May 2013    GPA: 3.95

## SKILLS

Python   C++   Java   R   PyTorch   Tensorflow   PostgreSQL   Git

## COURSEWORKS

Computer Vision   NLP   Optimization   ML   Probabilistic Graphical Model   AI   Neural Network   Stochastic Process

## AWARDS

### Data Science Fellowship
**University of Massachusetts, Amherst**

📅 May 2019 – August 2019

### Travel Grant
**Hanse-Wissenschaftskolleg Institute for Advanced Study, Germany**

📅 August 2018

### Exemplar Soldier Award
**Republic of Korea Army**

📅 September 2016

### American Math Competition - 1st
**Santa Monica College**

📅 October 2012

## PRESENTATIONS

- Hosted AI Summer Seminar at UMass, Amherst Summer 2019.
- Gave a talk about the Inclusive Green Growth project at Institute of Advanced Study, Germany in August 2018.