

# Sungmin Ji

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## PERSONAL STATEMENT

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I have two-year research experience in biology and zoology and a year of research experience in high dimensional statistical models. I'm interested in modeling biological phenomena with statistics. Specifically, the topics of genetic epidemiology and ecological and evolutionary biology are drawing my attention.

## EDUCATION

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Mar. 2021 - Feb. 2023	<b>Sungkyunkwan University</b> <i>Department of Statistics</i> Major in Statistics (Master's Degree in Progress) <i>Advisor: Prof. Seyoung Park (ishspsey@skku.edu)</i>	Seoul, Korea
Mar. 2012 - Feb. 2020 <sup>1</sup>	<b>Korea University</b> <i>Division of Biotechnology</i> B.S. in Biotechnology and <sup>2</sup> Bachelor's degree in Ecology and Evolutionary Biology	Seoul, Korea

<sup>1</sup>Including a leave of absence due to military service in the Republic of Korea Navy (May 2014 – Apr. 2016)

<sup>2</sup>Double Major with Student designing program: coursework on a specific topic designed by a student and his mentor.

## RESEARCH INTEREST

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- Statistical methods with high-dimensional variables
- Modeling Biological data
- Ecological and Evolutionary Biology and Epidemiology

## SKILL SUMMARY

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- Programming skills: R, Julia, Python, SAS
  - ✓ SAS Certified Specialist: Base Programming Using SAS 9.4

## PUBLICATIONS

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1. Ji, S. (2022+). Instar determination by constrained gaussian mixture models according to Dyar's rule. *bioRxiv*. <https://doi.org/10.1101/2022.12.26.521363>
2. Quynh Nguyen, H., Kim, E., Bae, Y., Chae, S., **Ji, S.**, Heo, J., ... Jang, Y. (2022). An effective method for accurate nymphal-stage delimitation of the cicada *Hyalessa fuscata*. *Journal of Asia-Pacific Entomology*, 25(3), 101952. <https://doi.org/10.1016/j.aspen.2022.101952>
3. **Ji, S.**, Sung, M., Kim, J., Park, J., Kim, H., & An, K. (2020). Fish distribution and community characteristics of agricultural waterways in the southern region of Korean watersheds. *Korean Journal of Environmental Biology*, 38(1), 146-159. <https://doi.org/10.11626/kjeb.2020.38.1.146>
4. Nguyen, H. Q., Serret, H., Bae, Y., Ji, S., Chae, S., Kim, Y. I., ... Jang, Y. (2020). Not all cicadas increase thermal tolerance in response to a temperature gradient in metropolitan Seoul. *Scientific reports*, 10(1), 1-12. <https://doi.org/10.1038/s41598-020-58276-0>

## RESEARCH EXPERIENCES

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- **Researcher (Grants: 2018 Wildlife Research Programs, The Biodiversity Foundation)** Jun. 2017 – Dec. 2018  
*Mentor: Prof. Kwang Guk An (kgan@cnu.ac.kr)*
  - ✓ Experiment design, fieldwork, and data analysis about freshwater fish in agricultural waterways in Korea
- **Researcher at Animal Communication Laboratory in Ewha women's University** Jun. 2016 – Feb. 2017  
*Advisor: Prof. Yi Kweon Jang (jangy@ewha.ac.kr)*
  - ✓ Fieldwork, animal behavior experiments, and molecular biology works on the cicada project  
(Studying the association of the thermal tolerance of cicadas and urban heat islands)
- **Research Assistant at Animal Communication Laboratory in Ewha women's University** Jan. 2014 – Mar. 2014  
*Advisor: Prof. Yi Kweon Jang (jangy@ewha.ac.kr)*
  - ✓ Fieldwork and animal behavior experiments on the tree frog project  
(Studying the distribution and behavior of *Dryophytes suweonensis* and *Dryophytes japonica*)

## WORKING EXPERIENCES

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- **Researcher at Department of Physiology in Ajou University Medical Center** Dec. 2020 – Feb. 2021  
*Supervisor: Prof. Hyun Goo Woo (hg@ajou.ac.kr)*
  - ✓ Uploading data (Next-generation Sequencing Data) on the Bio-data platform of the Republic of Korea
  - ✓ Collecting CCI (Cell-Cell Interactions in the tumor microenvironment) data by searching the literature
- **Research Assistant at Biodiversity and Ecology Laboratory in Korea University** May 2017 – Jan. 2018  
*Supervisor: Prof. Yeon Jae Bae (yjb@korea.ac.kr)*
  - ✓ Fieldwork and data analysis of benthic macroinvertebrates in World cup park  
(Outsourced by Seoul Metropolitan Government)

## AWARDS AND HONORS

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2022	Outstanding Poster Award, 2022 Annual Conference of Korean Society for Bioinformatics <ul style="list-style-type: none"><li>✓ Title: Multivariate single index models for predicting multi-dimensional drug responses</li></ul>
2019	Excellence Award in the Poster presentation, 2019 Conference of Korea Ecological and Environmental Science <ul style="list-style-type: none"><li>✓ Title: 농수로의 어류 군집 구조와 어류 서식지로서 역할 (Fish community structure of the agricultural waterways and their role as fish habitat)</li></ul>
2018	Students' Honor in the semester (Fall semester of 2018), Korea University

## EXTRACURRICULAR ACTIVITY

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열두루달 (XII) – Korea University Society of Ecology	Apr. 2017 – Dec. 2018
KU TTP - Korea University Piano Club	Mar. 2012 – Dec. 2013
SSI Open Water Diver	Jun. 2016
SSI Pool Freediving	Sep. 2015