

# JOHN CARLOS IGNACIO

[ignacio.8@buckeyemail.osu.edu](mailto:ignacio.8@buckeyemail.osu.edu) • +1 (607) 262-6660 • [\[LinkedIn\]](#) • [\[Github\]](#) • [\[Bitbucket\]](#)

Researcher with a passion for science and genetics. Driven to apply skills in genomics, statistics, and computer science to contribute to society. Strong foundation in statistics and currently writing a dissertation on evaluating linear mixed models for phenotypic prediction. Adept in a wide range of computational techniques from multivariate analysis, simulations, and optimization. Well-versed in analyzing data using R and writing software using Java and Python.

## SKILLS

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### Genetics and Genomics

Analyzed several genetic and genomic datasets for various applications such as population genetics, marker design, quantitative trait loci mapping, genome-wide association, and phenotypic predictions.

### Statistics

Linear mixed modeling and multivariate analysis of phenotypic and genomic data. Evaluation of statistical models using cross-validation methods.

### Computer science

Applied optimization algorithms to solve problems in the field of genetics. Written software packages in Java and Python to analyze genetic markers and an R package to correct sequence-based genotyping errors.

## EXPERIENCE

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### Research Associate

2020-present

Ohio Agricultural Research and Development Center, The Ohio State University

Evaluation and implementation of genomic prediction using linear mixed models for yield and disease resistance improvement in wheat

### Assistant Scientist - Genetics and Genomics

2015-2020

International Rice Research Institute, Los Baños, Philippines

Led design and validation of sequence-based and fluorescence-based marker assay and analysis tools and integrated them into decision-support pipelines

### Assistant Scientist - Genetics

2010-2015

International Rice Research Institute, Los Baños, Philippines

Association of genetic markers with quantitative traits related to flood tolerance in rice

## EDUCATION

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### PhD in Horticulture and Crop Sciences, The Ohio State University

Dec 2022 (Expected)

Focused more on statistic courses such as linear mixed models, multivariate analysis, and experiment design

### MS in Genetics and Computer Science, University of the Philippines Los Baños, Philippines

Dec 2019

Genetics, molecular breeding, and optimization algorithms

### BS in Biology, University of the Philippines Baguio, Philippines

Oct 2010

## REFERENCES

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### Dr. Clay Sneller

- Professor, Wheat Breeding
- The Ohio State University, Wooster, OH
- +1 (330) 749-8942
- [sneller.5@osu.edu](mailto:sneller.5@osu.edu)

### Dr. Endang Septiningsih

- Associate Professor, Rice Genetics and Genomics

- Texas A&M University, College Station, TX
- +1 (979) 845-7527
- [eseptiningsih@tamu.edu](mailto:eseptiningsih@tamu.edu)

**Dr. Elizabeth Jones**

- Senior Principal Scientist
- Embark Veterinary, Ithaca, NY
- +1 (607) 793-4062
- [ejones@embarkvet.org](mailto:ejones@embarkvet.org)