

JOHN CARLOS IGNACIO

GENETICS AND GENOMICS, PHD STUDENT

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ignacio.8@buckeyemail.osu.edu

+1 (607) 262-6660

Profile {#profile}

Life-long scholar with a passion for science and genetics research. Driven to apply skills in genomics, statistics, and computer science to contribute to society. Strong foundation in statistics and currently writing a dissertation on evaluation of 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 softwares using Java and Python.

Skills {#skills}

- Genetics and Genomics : Analyzed several genetic and genomic datasets for a wide-range of applications such as population genetics, 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 sciences : 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
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Technical {#technical}

- R
 - Unix
 - Java
 - Python
 - Cloud computing
 - Version control
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R packages {#rpackages}

- nlme/lme4
 - ggplot2
 - dplyr
 - reshape2
 - ASReml
 - GAPIT
 - R-markdown
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Experience {#experience}

Ohio Agricultural Research and Development Center, The Ohio State University : *Research Associate* **2020-present**
Evaluation and implementation of genomic prediction using linear mixed models for yield and *Fusarium* head blight disease resistance improvement in wheat

International Rice Research Institute, Los Baños, Philippines : *Assistant Scientist, Genetics and Genomics* **2015-2020** Led development and integration of sequence-based and fluorescence-based marker data analysis tools with breeding decision-support tools

International Rice Research Institute, Los Baños, Philippines : *Assistant Scientist, Genetics* **2010-2015** Association of genetic markers with quantitative traits related to flood tolerance in rice

Education {#education}

The Ohio State University : *Doctor of Philosophy in Horticulture and Crop Sciences* **2022 (expected in December)**

University of the Philippines Los Baños, Philippines : *Masters in Genetics and Computer Science* **2019**

References {#references}

Dr. Clay Sneller Professor, Wheat Breeding The Ohio State University, Wooster, OH +1 (330) 749-8942 sneller.5@osu.edu

Endang Septiningsih Associate Professor, Rice Genetics and Genomics Texas A&M University, College Station, TX +1 (979) 845-7527 eseptiningsih@tamu.edu

Elizabeth Jones Senior Principal Scientist Embark Veterinary, Ithaca, NY +1 (607) 793-4062
