

JOHN CARLOS IGNACIO

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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

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

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

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

Dr. Clay Sneller

- Professor, Wheat Breeding
- The Ohio State University, Wooster, OH
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Dr. Elizabeth Jones

- Senior Principal Scientist

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- Associate Professor, Rice Genetics and Genomics
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