GUSTAVO CÉSAR VISENTINI

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Education

Ph.D., Agronomy 2024
University of Passo Fundo – Passo Fundo, RS - Brazil
- Designed and executed scientific research projects in the development of mobile applications and frameworks for data capture and execution of simulation models for soybean crops.
- Scholarship from: CAPES, Brazil.

Master's in Applied Computing 2018
University of Passo Fundo – Passo Fundo, RS - Brazil
- Designed and executed scientific research projects in the development of mobile applications and frameworks for aerial data and image capture and processing images using computer vision.
- Scholarship from: University of Passo Fundo – UPF, Brazil.

Bachelor of Computer Science 2015
University of Passo Fundo – Passo Fundo, RS - Brazil

Experience

Post-Doctoral Associate 2025 - Present
Horticultural Sciences | IFAS | University of Florida – Gainesville, FL, EUA
- I developed and integrated software focused on genotype by environment by management interactions in corn using models such as DSSAT and APSIM on the Hipegator Supercomputer.
- I trained and assisted two graduate students with modeling and simulation, and an undergraduate student from the IoT4Ag program in developing specialized LLMs for nutrient management.
- I conducted research on genotype-by-environment and management interactions in corn, as well as developing software to generate results from these interactions.
- I collaborated on and supervised external funding proposals.

Professor of Computer Science and Agronomy courses. 2022 - Present
Regional Integrated University (URI) - Erechim, RS, Brazil.
- In Computer Science, professor of object-oriented programming, mobile programming, parallel and distributed programming and integrative projects.
- In Agronomy, professor of Introduction to computer science for the agronomic environment.
- Advisor the students in their final thesis .

Substitute Professor of Technical High School of Computer Science. Feb 2018 - Dec 2018
Instituto Federal Catarinense IFC - Concórdia, SC, Brazil.
- Professor in Computer Networks, Database, Programming II (Object Oriented), ICI (Initiation to
- Computing and Informatics), IPC (Initiation to Scientific Production), Fundamentals of Logic and Algorithms.

Mobile Developer 2015 - Present
Freelance Developer - Erechim, RS, Brazil.
- Development of mobile applications focused on agriculture, using computer vision.

DSSAT 2024 International Training Program May 2024 - May 2024
The University of Georgia at Griffin, Georgia, USA

- Assessing Crop Production, Water and Nutrient Management, Climatic Risk, and Environmental Sustainability with Simulation Models.

Oral Presentations

VISTAA - Virtual Intelligent Simulation Tool for Agriculture Advisor. 2026
Banga A; **Visentini GC**; Pavan W; Messina CD. ICROPM2026 Crop Modeling for Agriculture and Food Security. Firenze, Italy. February 2th - 4th.

VISTAA - Virtual Intelligent Simulation Tool for Agriculture Advisor. 2025
Banga A; **Visentini GC**; Pavan W; Messina CD. IoT4Ag 2025 Annual Retreat The Internet of Things for Precision Agriculture. Philadelphia, Pennsylvania. June 04th

Selected Poster Presentations

Banga A; **Visentini GC**; Pavan W; Messina CD. 2025
VISTAA – Virtual Intelligent Simulation Tool for Agriculture Advisor. Presented on IoT4Ag Site visit. November 18th to 20st 2025. Philadelphia, EUA.

Panelo JS; Cabrera M; Boer M; Hisse IR; **Visentini GC**; Parette A; Banga A; Messina CD. 2025
Plants and Machines: Reducing predictability gaps in breeding for drought tolerance. presented to Interdrought VIII. November 17th to 21st 2025. La Serena, Chile.

Visentini GC; Panelo JS; Hisse IR; Mayor L; Mbaye M; Cooper M; Hammer G; Messina CD. 2025
Enabling Gap Analysis Methodology for Maize, Sorghum and Millet Breeding. Presented on Interdrought VIII. November 17th to 21st 2025. La Serena, Chile.

F. Magshood; C. Li; **Visentini GC**; C. Messina. 2025
Spatiotemporal Modelling of Hydrological Processes and Nitrogen Dynamics in a Digital Twin Framework for Agricultural Landscapes presented oo Interdrought VIII. November 17th to 21st 2025. La Serena, Chile.

Patents

1. Soybean Alert. Brazil, 2024. Mobile application developed as an outcome of Ph.D. research for soybean crop monitoring. Registered at INPI (BR512024002046-2). June 25, 2024

2. Soybean API. Brazil, 2024. Application Programming Interface designed to simulate soybean crop growth integrated with the Soybean Alert app, developed during Ph.D. research. Registered at INPI (BR512024002047-0). June 25, 2024

3. iOS Drone Imaging App. Brazil, 2019. iOS mobile application for automatic image capture using DJI drones. Funded by University of Passo Fundo. Registered at INPI (BR512019000955-0). May 28, 2019

4. MacOS Image Mosaicking Software. Brazil, 2019. MacOS software for digital image mosaicking and processing. Funded by University of Passo Fundo. Registered at INPI (BR512019000956-8). May 28, 2019

International Agriculture

FONTAGRO 2025
"Integration of sorghum cultivation into the production systems of Central America." Establishment of a hybrid sorghum testing network in Latin America. FONTAGRO – Inter American Development Bank. Technical Leader.

Skills

Management Skills: Decision making, Ability to inspire and motivate, Group Work, Emotional intelligence, Flexibility, Problem solving.
Technical Skills: Mobile development, iOS development, Swift, Flutter, Dart, PHP, R, C++, Python, Java, Embedded Systems, Drone configuration and maintenance, Digital Image Processing, Computer Vision, Crop Simulation Modeling, DSSAT, APSIM, High performance computing.

Research Interests

Genotype by Environment by Management interactions, High performance computing, Mobile Applications, Flutter, Frameworks, Crop Models, DSSAT, APSIM, Computer Vision, Artificial Intelligence, Weather Data Collection.

References

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