Claudio César **Claros Olivares**

Electronics Engineer

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Education

Universidad Mayor de San Andrés (UMSA) — *La Paz, Bolivia*
M.Sc. in Electronics Engineering — *Oct. 2020 - present*

University of Delaware (UDel) — *Delaware, USA*
M.Sc. in Electrical & Computer Engineering — *Aug. 2018 - Aug. 2020*
- Concentration: Signal Processing, Communications, and Controls
- Thesis title: "Synergistic Human-Machine Prediction: Active Error Analysis and Mitigation with Gaussian Process Regression" (advisor: Prof. Dr. Austin J. Brockmeier).
- GPA: 3.933/4.000

Centro Psicopedagógico y de Investigación en Educación Superior (CEPIES) — *La Paz, Bolivia*
Short-Term Certificate Program in University Teaching — *Aug. - Nov. 2015*

Universidad Mayor de San Andrés (UMSA) — *La Paz, Bolivia*
B.S. in Electronics Engineering — *Feb. 2007 - Dec. 2014*
- Major: Control Systems
- Graduation project: "Prototipo para generación de consignas de control a partir de los ritmos cerebrales alpha y mu - Caso de estudio: Factibilidad de uso de la plataforma Emotiv EPOC" (advisor: Prof. Javier Sanabria García).
- Class Valedictorian.

Don Bosco "El Prado" High School — *La Paz, Bolivia*
Technical School Graduate — *Feb. 1995 - Dec. 2006*
- Graduated with honors

Skills

Programming Languages	Python, C/C++, Matlab, Octave, JavaScript, Julia
Programming Libraries	OpenCV, CUDA, SciPy, NumPy, Pandas
Machine Learning Frameworks	TensorFlow, PyTorch, Keras, Scikit
Languages	English (TOEFL: 104/120, ECCE), French (DELF B2), Spanish (Native)

Experience

Computational Neural and Information Engineering Lab, UDel — *Delaware, USA*
Research Assistant — *Jul. 2019 - Aug. 2020*
- Developed a synergistic system for human-machine prediction through active error analysis of models systematic errors using Gaussian process regression.

Institute of Applied Electronics, UMSA — *La Paz, Bolivia*
Researcher — *Jun. - Dic. 2017*
- Designed and implemented of embedded software dedicated to signal acquisition and control of a mobile robot prototype for multi-agent research.

Institute of Applied Electronics, UMSA — *La Paz, Bolivia*
Researcher — *Abr. - Dic. 2016*
- Developed a platform for mobile sensor nodes deployed in controlled environments which integrates the design of the robotic units and the implementation of data acquiring and signal processing tools.

Agencia para el Desarrollo de la Sociedad de la Información en Bolivia (ADSIB) — *La Paz, Bolivia*
Research Intern — *Sep. - Dic. 2015*
- Designed and implemented of an FPGA interface for Ethernet communication dedicated to packet acquisition and routing for the 'FPGA-based router' project.

Electronics Engineering (EE) Department, Digital Signal Processing Lab, UMSA — *La Paz, Bolivia*
Laboratory Assistant — *Jul. - Dic. 2013*
- Responsible for the maintenance and operation of the digital signal processing laboratory.

Institute of Applied Electronics — *La Paz, Bolivia*
Research Assistant — *Mar. - Ago. 2012*
- Developed a software application for EEG acquisition and signal processing to conduct spectral analysis through Fast Fourier Transforms.

Honors & Awards

2017	**Bolivian Government Scholarship.** National program that enables young professionals to pursue a M.Sc. or Ph.D. degree in a top university—30 out of 100 possible scholarships awarded this year.	*La Paz, Bolivia*
2015	**Honorable Mention "Most Challenging Team".** "Minesweepers: Towards a Landmine-Free World 2015" Competition. Team: "Bolivian Team".	*Antofagasta, Chile*
2015	**Senatorial Declaration.** Chamber Of Senators of the Plurinational Legislative Assembly of Bolivia. Acknowledgment for outstanding participation in the NASA Space Apps Challenge 2015.	*La Paz, Bolivia*
2015	**Resolution of the Honorable University Council.** UMSA. Congratulatory letter for outstanding participation in the NASA Space Apps Challenge 2015.	*La Paz, Bolivia*
2015	**Worldwide Finalist.** International NASA Space Apps Challenge 2015. Nationwide winner in the category "Best Robotics Theme Project" and worldwide finalist in the category "Best Mission Concept Project" with the project "Sensor your Swarm".	*La Paz, Bolivia*
2015	**Maximum score achieved on the undergraduate graduation project.** EE Department, UMSA.	*La Paz, Bolivia*
2010	**Remarkable academic performance.** UMSA. Congratulatory letter awarded to the best students of the year	*La Paz, Bolivia*

Publications

[1] C. C. Claros Olivares and J. Sanabria García, "Prototipo para generación de consignas de control a partir de los ritmos sensomotores. Caso de Estudio: Factibilidad de empleo de la plataforma Emotiv Epoc," in *IEEE Bolivian Engineering and Technology Congress (BETCON) 2015*, La Paz, Bolivia, 2015.

[2] A. J. Brockmeier, C. C. Claros Olivares, M. S. Emigh, and L. G. Sanchez Giraldo, "Max-sliced bures distance for interpreting discrepancies," in *The Thirty-eighth International Conference on Machine Learning*, under evaluation, 2021.

[3] C. C. Claros Olivares and A. J. Brockmeier, "Synergistic human-machine prediction: Active error analysis and mitigation with gaussian process regression," to be submitted.

Presentations

"DARWIN Computing" Symposium — *Delaware, USA*
Poster presentation on "Active Error Analysis and Mitigation for Synergistic Machine Learning Infrastructure" — *Feb. 2020*
- Organized by the Data Science Institute (DSI) of the University of Delaware

Special Interest Group in Artificial Intelligence (SIG-AI) Seminar — *Delaware, USA*
Invited speaker on "Learning an error-aware model for synergistic human-machine prediction". — *Nov. 2019*
- Organized by the Computer & Information Sciences (CIS) Department of the University of Delaware

IEEE Seminar on Artificial Intelligence — *La Paz, Bolivia*
Invited speaker on "Digital Signal Processing Algorithms and Machine Learning". — *Apr. 2016*
- Organized by the IEEE Student Branch of the Universidad Católica Boliviana

First International Scientific Congress on Engineering — *La Paz, Bolivia*
Invited speaker on the "Sensor your Swarm" project. — *May. 2015*

La Paz Ciudad Digital 2.0 — *La Paz, Bolivia*
Invited speaker on "Research on Brain Signal Processing" — *Aug. 2014*
- Representing the Institute of Applied Electronics of the Universidad Mayor de San Andrés