

Clayder Gonzalez Cadenillas, M.Sc.

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Education

- 2016 – 2019 📖 **M.Sc. Electrical Engineering, University of Chile**
Thesis title: *An Improved Feature Extractor for the LiDAR Odometry and Mapping Algorithm.*
- 2015 📖 **Informatics Engineer, National University of Trujillo**
Thesis title: *Design of an Embedded System to Control a Robot Arm Using Voice Commands.*
- 2008 – 2012 📖 **B.S. Computer Science, National University of Trujillo**

Research Publications

Conference Proceedings

- 1 R. J. H. Kemper, **C. Gonzalez**, and S. R. P. Gardini, “Autonomous navigation of a four-wheeled robot in a simulated blueberry farm environment,” in *2022 IEEE ANDESCON*, 2022, pp. 1–6. 🌐DOI: 10.1109/ANDESCON56260.2022.9989865.
- 2 **C. Gonzalez** and M. Adams, “An improved feature extractor for the lidar odometry and mapping (loam) algorithm,” in *2019 International Conference on Control, Automation and Information Sciences (ICCAIS)*, **Cited by 7**, 2019, pp. 1–7. 🌐DOI: 10.1109/ICCAIS46528.2019.9074665.
- 3 M. Mattamala, G. Olave, **C. Gonzalez**, N. Hasbún, and J. Ruiz-del-Solar, “The nao backpack: An open-hardware add-on for fast software development with the nao robot,” in *RoboCup 2017: Robot World Cup XXI*, H. Akiyama, O. Obst, C. Sammut, and F. Tonidandel, Eds., **Cited by 12**, Cham: Springer International Publishing, 2018, pp. 302–311, ISBN: 978-3-030-00308-1. 🌐DOI: 10.1007/978-3-030-00308-1_25.
- 4 **C. Gonzalez-Cadenillas** and N. Murrugarra-Llerena, “Isolated words recognition using a low cost microcontroller,” in *2013 III Brazilian Symposium on Computing Systems Engineering*, **Cited by 5**, 2013, pp. 77–82. 🌐DOI: 10.1109/SBESC.2013.28.
- 5 **C. Gonzalez-Cadenillas** and G. Reaño-Ortega, “Sistema de clasificacion automatica de objetos etiquetados con digitos escritos a mano usando ocr y redes neuronales,” in *2012 Congreso Nacional de Estudiantes de Ingenieria Mecanica, Electronica y Ramas Afines*, 2012, pp. 1–6.

Participation in Funded Research Projects

- 2022 – 2023 📖 **Co-Researcher**, Development of a Multi-functional Machine for the Sowing of Seeds of Different Sizes in Multi-cell Trays and Peeling of Seedlings according to the quality of Growth in Plant Nurseries at La Libertad-Perú, Funded by Consejo Nacional de Ciencia y Tecnologia (CONCYTEC), Peru.
- 2021 – 2023 📖 **Co-Researcher**, Development of a Mobile Robot with Capabilities of Localization, Mapping and Data Processing using Artificial Intelligence to Improve the Accuracy of Blueberry Farming in Agriculture Companies at La Libertad-Perú, Funded by Consejo Nacional de Ciencia y Tecnologia (CONCYTEC), Peru.

Skills

- Languages ■ Strong reading, writing and speaking competencies for English and Spanish.
- Coding ■ C++, C, Python, Matlab, Microchip C, PIC Microncontroller Assembly, X86 Assembly, Latex.
- Libraries ■ Point Cloud Library (PCL), Eigen Library, CUDA, OpenCV.
- Frameworks ■ Robot Operating System (ROS).
- Misc. ■ Academic research, teaching, Latex typesetting and publishing.

Employment History

- 2014 – Today ■ **Guidance Teacher**, Universidad de Buenos Aires (UBA), Embedded Systems Specialization, Project: Power Subsystem for Underwater Robotics, Student: Nicolas Hasbun.
- 2021 ■ **Embedded Software Developer**, Delion Group, Project: Dfrag, A LiDAR-based Embedded System to Compute Surfaces Volumes after Mining Blasting.
- 2020 – Today ■ **Assistant Professor**. School of Electronics Engineering, Antenor Orrego Private University, Subjects: Robotics and Artificial Intelligence, Digital Signal Processing, Computer Programming.
- 2019 – 2020 ■ **Lecturer**. School of Mechatronics Engineering, National University of Trujillo, Subjects: Computer Programming 2.
- 2018 – 2019 ■ **Lecturer**. School of Electronics Engineering, Antenor Orrego Private University, Subjects: Digital Signal Processing, Computer Programming.
- 2015 – 2016 ■ **Mobile Developer**. Wando Group
- **Teaching Assistant**. School of Electronics Engineering, Antenor Orrego Private University, Subjects: Computer Programming.
- 2008 – 2010 ■ **Web-master**. Sociedad de Estudiantes de Ciencia de la Computacion (SECC)

Miscellaneous Experience

Awards and Achievements

- 2021 ■ **First Place**, 2021 INTERCON Minesweeper Robots Contest, Federico Villareal National University - IEEE Peru Section.
- 2012 ■ **Honorable Mention**, 2012 ACM - International Collegiate Programming Contest, South America/South Regional Contest, ACM-ICPC.
- **Second Place**, 2012 COINTEC - Projects Fair, School of Electronics Engineering, Antenor Orrego Private University.
- 2006 ■ **First Place**, 2006 Congreso de Ingenieria de Sistemas - Programming Contest, School of Computing Systems, Antenor Orrego Private University.

Certification

- 2022 ■ **Fundamentals of Accelerated Computing with CUDA C/C++**. Awarded by Nvidia Deep Learning Institute.
- **Modern Robotics, Course 1: Foundations of Robot Motion**. Awarded by Northwestern University.
- 2021 ■ **Advanced microcontrollers**. Awarded by National University of Trujillo.
- 2007 ■ **Certificate of Competency in English**. Awarded by English Language Institute - University of Michigan.

References

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Prof Ricardo Prado Gardini

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