Juan Camilo Lozano Carrillo, Ph.D.

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🌐 https://juanclozano.com/

🎓 https://scholar.google.com/citations?user=REWcf5AAAAAJ

💬 Fluent in English and Spanish

Education

Jan 2019 – Dec 2024	🔖 **Ph.D. in Computer Science and Engineering**, University of California, Santa Cruz.
Jan 2019 – May 2023	🔖 **M.Sc. in Computer Science and Engineering**, University of California, Santa Cruz
Feb 2011 – Nov 2015	🔖 **M.Sc. in Biomedical Engineering**, Universidad Nacional de Colombia.
Feb 2005 – May 2010	🔖 **BSc. in Electronics Engineering**, Universidad Nacional de Colombia.

Awards and Achievements

2024	🔖 **CPSIoTSec 2024 Best Paper Award**, The Joint Workshop on CPS & IoT Security and Privacy.
2023	🔖 **Commander's Award**, 2023 Cyber Recon by United States Cyber Command.
2018	🔖 **Fulbrigth Scholarship**, US Department of State and Colombian Ministry of Information Technologies and Communications.

Teaching Experience

Sep 2024 – Dec 2024	🔖 **Teaching Assistant.** Applied Discrete Mathematics; Computer Science Department; Baskin School of Engineering; University of California, Santa Cruz.
Mar 2024 - Jun 2024	🔖 **Graduate Student Instructor.** Applied Discrete Mathematics (120 students class); Computer Science Department; Baskin School of Engineering; University of California, Santa Cruz.
Sep 2019 – Dec 2023	🔖 **Teaching Assistant.** Computer Security, Cyber Physical Systems Security & Applied Discrete Mathematics courses; Computer Science Department; Baskin School of Engineering; University of California, Santa Cruz.
Feb 2011 – Nov 2012	🔖 **Teaching Assistant.** Telemedicine graduate course; Medicine School; Universidad Nacional de Colombia.

Research Publications

Published

1. K. Koneru, J. Lozano, J. Castellanos, E. Zambon, and A. Cardenas, "Unveiling the operation and configuration of a real-world bulk substation network," in *EAI SmartSP 2024 - 2nd EAI International Conference on Security and Privacy in Cyber-Physical Systems and Smart Vehicles*, IEEE, 2024. 🔗 DOI: 10.1007/978-3-031-93354-7_10.

2. L. Salazar, S. Castro, J. Lozano, *et al.*, "A tale of two industroyers: It was the season of darkness," in *2024 IEEE Symposium on Security and Privacy*, ser. 2024 IEEE Symposium on Security and Privacy, IEEE, 2024. 🔗 DOI: 10.1109/SP54263.2024.00162.

3. L. Salazar, E. Morales, J. Lozano, C. Medrano, and A. Cardenas, "Icsnet: A hybrid-interaction honeynet for industrial control systems," in *Proceedings of the Sixth Workshop on CPSIoT Security and Privacy (CPSIoTSec'24)*, 2024. 🔗 DOI: 10.1145/3690134.3694813.

[4] J. Lozano, K. Koneru, N. Ortiz, and A. A. Cardenas, "Digital substations and iec 61850: A primer," *IEEE Communications Magazine*, vol. 61, no. 6, 2023, ISSN: 0163-6804. DOI: 10.1109/MCOM.001.2200568.

[5] J. Lozano, K. Koneru, J. H. Castellanos, and A. A. Cardenas, "Timing analysis of goose in a real-world substation," in *2022 IEEE International Conference on Communications, Control, and Computing Technologies for Smart Grids (SmartGridComm)*, ser. 2022 IEEE International Conference on Communications, Control, and Computing Technologies for Smart Grids (SmartGridComm), IEEE, 2022, ISBN: 1-66543-255-1. DOI: 10.1109/SmartGridComm52983.2022.9961030.

[6] D. Vanegas, C.-C. Galindo, I.-A. Paez-Gutiérrez, *et al.*, "Human leukocyte antigen and red blood cells impact umbilical cord blood cd34+ cell viability after thawing," *International Journal of Molecular Sciences*, vol. 20, no. 19, 2019, ISSN: 1422-0067. DOI: 10.3390/ijms20194875.

Work Experience

Oct 2025 - Current	**Data Scientist and Governance consultant.** at Medellin Planning and development department; Medellín, Colombia. **Description:** I am supporting Medellin's Land Use planning by interpreting, analyzing and generating statistical models from georeferenced data collected on the mandatory update of a Land Use Plan, I am applying Machine Learning and Natural Language Processing on innovative solutions for Colombia's second city next decade plan.
Jan 2018 - Jul 2018	**Software Developer** at The District Institute of Science, Biotechnology and Innovation in Health (IDCBIS); Bogotá, Colombia. **Description:** I designed and implemented a matching software for the Human Leukocyte Antigen for IDCBIS' Umbilical Cord Bank using Python and proposed validation strategies, additionally I implemented a Graphic User Interface.
Aug 2017 - Dec 2017	**Patent Reviewer** at the Colombian National Patent Office; Bogotá, Colombia **Description:** I reviewed novelty claims of patent files in the tech field, delivering reports that either accepted or denied a patent issued by the Colombian government.
Feb 2013 - Jun 2015	**Telemedicine and Project Engineer** at the Universidad Nacional de Colombia's Telemedicine Center; Bogotá, Colombia **Description:** I worked on stablishing Telemedicine requirements for the Colombian Ministry of Health, I evaluated legal requirements for health devices safety compliance before Colombia's Invima office, I was also part of a group that worked on developing wireless technologies that would help data transmission on remote areas in Colombia aiming telemedicine applications.

Professional Service

2023	**Reviewer** of the article *"ERENO: A Framework for Generating Realistic IEC-61850 Intrusion Detection Datasets for Smart Grid* in Transactions on Dependable Security.
2025	**Reviewer** of the article *Cybersecurity audit in critical infrastructures of the health sector using NIST CSF and OCTAVE Frameworks* in Revista Ingeniería Universidad de Antioquia

Skills

Languages	Spanish, English.
Coding	Java, Python, R, SQL, Matlab.
Misc.	Academic research, teaching.