Santiago Hernández Senosiain

cv@santihdzs.com | santihdzs | santihdzs | portfolio

EDUCATION

Instituto Tecnológico y de Estudios Superiores de Monterrey – BSc Computer Science Aug. 2024-Present
- Relevant Coursework: Algorithms, Database Systems, Object-Oriented Programming.
- Achievements: Contributed to the redevelopment of MiTEC, enhancing user experience for over 50,000 students.

The Edron Academy – International Baccalaureate Diploma July 2024
- Higher Level Subjects: Computer Science, Mathematics, Economics.

PROFESSIONAL EXPERIENCE

ITESM – Undergraduate Researcher Oct. 2025 – Present
- Supervised by Dr. Gerardo Ibarra Vázquez
- Conducting robustness evaluation of DCNNs under adversarial perturbations.

ITESM – Teaching Assistant Aug. 2025 – Present
- Assisting in the Programming of Data Structures and Fundamental Algorithms course (TC1031).
- Designed programming assignments and exercises for ∼90 students.
- Developed detailed solution sets to validate professor's assignments and ensure accurate student feedback.
- Created presentations to support lectures on core data structures and algorithms.
- Provided technical assistance with C++ compiler setup and troubleshooting for ∼30 students.

Engen Captial – Work Shadowing Experience Nov. 2022 – Dec. 2022
- Gained hands-on experience with Agile software development, participating in sprint planning and iterative project delivery.
- Collaborated with a team of data scientists to clean and analyze financial datasets for high-profile clients, including Walmart.
- Developed a Spring Boot project using Spring Initializr and Kotlin, delivering scalable and maintainable backend solutions.

EXTRACURRICULAR

ITESM Competitive Programming Club – Member Aug. 2025 – Present
- Attending regular problem-solving sessions focused on algorithms, data structures, and competitive programming techniques.
- Collaborating with a 3-member team to prepare for national and international competitions, including the International Collegiate Programming Contest (ICPC).

RESEARCH PROJECTS

RSA Encryption | *Number Theory, Algebraic Structures, Cybersecurity* Mar. 2024
- Conducted in-depth research on the security of RSA encryption, identifying potential vulnerabilities in its implementation.
- Utilized group theory to analyze the algebraic structure of the cryptosystem, devising a theoretical approach to derive private keys from public keys.
- Authored a paper on the findings, which received the highest possible grade (7) for IB coursework.

National Hockey League Modeling | *Mathematical Modeling, Large-scale Data Analysis* Oct. 2023
- Developed a mathematical model to predict winning teams in National Hockey League (NHL) matchups, based on the Bradley-Terry model.
- Enhanced predictions by implementing exponentially weighted moving averages (EWMA) to account for recent performance trends.

SKILLS & INTERESTS

Languages: English and Spanish (fluent in both)

Software: C++, Python, JavaScript, SQL, Bash | Git, Node.js, MATLAB, AWS | Unix Environment

Interests: Cybersecurity, Software Development, Computational Modeling, Data Science, Number Theory