

# MAYRA DÍAZ TRAMONTANA

mayra.diaz.tramontana@gmail.com

mayradt.com

linkedin.com/in/mayra-dt

Enthusiastic student interested in technology innovation, digital transformation, data management and data analytics.  
Currently seeking to participate in research projects and challenging internships.

## ACADEMIC BACKGROUND

### Colorado School of Mines - Golden, CO

January 2023 - May 2023

*Computer Science - Exchange student*

- Enrolled in 2 graduate courses in cryptography and robotics, and 3 others in data engineering, games development and personal branding; where I applied my knowledge to develop a variety of projects in multicultural environments.

### University of Engineering and Technology (UTEC) - Lima, PE

March 2019– July 2024

*Computer Science - Upper third - Student President*

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## PROFESSIONAL EXPERIENCE

### Colorado School of Mines - Golden, CO

May 2023 - August 2023

*Research Assistant*

- Conducted a deep analysis of the VF2 Graph Isomorphism algorithm for semantic RDF graphs using Python to optimize its performance.
- Benchmarked open-source implementations and developed custom versions for improved performance in Mortar: A Platform for Reproducible Building Analytics.

### AVLA Peru Insurance Company - Lima, PE

July 2022 - January 2023

*Risk Management Intern*

- Conducted an optimization of a security process with python, SQL and APIs resulting in a reduction from 12 months to 2 min.
- In control of reviewing and making presentations of ethical hacking reports for the managers and board of directors.
- Managed and developed the website and documentation of tasks using agile methodologies, Notion, React and Javascript.
- Designed, planned, managed and analyzed data from an international cybersecurity campaign for nearly 500 employees in 4 countries, resulting in 6 workshops, 2 quizzes, 3 challenges, development of webpage and an 20% increase in engagement.

### University of Engineering and Technology (UTEC) - Lima, PE

August 2020 – December 2022

*Teaching Assistant - Programming 1 and Introduction to Computer Science*

- Supported the course to effectively teach programming, computational thinking and an overview of computer science.
- Organized and led groups of up to 7 assistants to develop some of the course content, homework and autograders.
- Provided support for up to 4 classrooms of 250+ students each by creating exam solutions and exercise sheets in Latex.
- Developed and provided activities and interactive exercises for 80+ students resulting in 80% of engagement and attendance.

### Luteach and Papaya Tutors - Lima, PE

February 2020 – March 2021

*Student teacher*

- Taught more than 20 hours in programming courses about Python and C++.
- Develop customized exercises and presentations for students that lead to better understanding and higher grades.

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## RELEVANT PROJECTS

### Project Conserving Ancestral Varieties from Farm-to-Fork

*Compsust, Grupo Yanapaj, Aguapan, Resonanz Group and International Potato Center*

- Research project to train an artificial intelligence model for the detection of 80 potato varieties, identifying their morphological characteristics and recognizing potato taxonomic clusters.
- Responsible for the development of the software tool to label potatoes using React, NodeJS and Vite.

### Demystifying Duo Security's MFA and Okta Verify's SSO Solution Used at Colorado School of Mines

- Analyzed Duo Security's MFA and Okta Verify's SSO solutions using research skills and cryptography knowledge to analyze their security and accessibility, culminating in the development of a comprehensive paper that offers an in-depth explanation of both systems while providing a critical analysis of their strengths and weaknesses in terms of security and accessibility.

### Robot Understanding of Human Behaviors Using Skeleton-Based Representations

- Developed and trained a robust model utilizing skeleton-based representations, machine learning, Python, and ROS, to accurately identify and classify human behaviors.

### StockX dataset cleaning and analysis

- Performed comprehensive cleaning, analysis, and visualization of the StockX dataset by leveraging data science techniques with SQL, Pandas, Seaborn and GeoPandas resulting in meaningful insights.

### Petbuss business analysis and design of technological business strategies

- Consulting project that helped real entrepreneurs to analyze and improve their business by constructing new business strategies. Petbuss is a business that does pet transportation and assistance in pet medical appointments and other procedures.

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## COMPLEMENTARY SKILLS

**Soft skills:** leadership, teamwork, adaptability, organization, problem solving, time management, scheduling, critical thinking.

**Languages:** written and verbal fluency in English and Spanish, basic Portuguese.

**Computer Science:** Object-oriented programming, database design, Tableau, machine learning, data visualization, Latex, research skills, advanced data structures, robotics, cryptography, agile methodologies: SCRUM, Design Thinking, Kanban.

**Advanced programming:** C/C++, Python, Javascript, Java, R, MATLAB, Scilab, SQL, ROS, React, Django, Springboot, Scikit-learn, Matplotlib, Pandas, GameMaker, TimescaleDB.

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## LEADERSHIP POSITIONS

### IEEE Computer Society President

**January 2021 - December 2021**

- Managed a team of more than 16 people, resulting in more than 12 events and an international conference.
- Delegated roles for organizing social events such as workshops, seminars, and integrations on topics related to computing.

### Peer Mentoring Program at UTEC University

**March 2020 – August 2021**

*Program leader and peer mentor*

- Organized a team of 10 peer mentors and developed the mentoring materials for over 90 students. Followed up with all groups and coordinated with the program managers resulting in 75% of attendance.
- Responsible for 15 students per semester and weekly meetings to provide orientation and support in their transition to college by teaching them useful skills such as organization, time management, stress management, and public speaking.