Romel Aldair Vázquez Molina

Date of Birth: 08/20/2000
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EDUCATION

Instituto Tecnológico de Estudios Superiores de Monterrey Campus Monterrey – Nuevo León, México — January 2019-June 2024(Expected Graduation Date)
"Bachelor of Software Engineering"
Average grade: 98/100, (3.9 GPA)

University of International Business and Economics – Beijing, China — July 2017 -August 2017
"*Study abroad: Chinese culture and mandarin language*"

Algebra University College – Zagreb, Croatia — July 2021
"Artificial Intelligence Course"

Universität Wien – Vienna, Austria — July 2021
"Conferences about experimentation and training for software engineering activities"

WORK EXPERIENCE

Kumon — Santiago de Querétaro, Querétaro, México

Math Coach — September 2018 – January 2019

- Encouraged and taught children and teenagers, to develop their skills in mathematics.
- Taught them how to solve difficult problems, by dividing into simple tasks.

PROJECTS

Github link: *https://github.com/RomelVazquez2008/RomelVazquezProjects*

Lights Traffic Optimization – University Project (Multi-agent systems) — 2021
In a team of four members, we develop a simulation of the implementation of smart lights traffic in one corner of our streets, to reduce the vehicular traffic at some hours
- Implemented in Python, C# and Unity (400 code lines in Python and 300 code lines in C#)
- I designed the car and light traffic agents with the agentPy library.

Lexical Analyzer – University Project (Computational Methods course) — 2021
This program processes a sequence of characters in a txt file to identify all the token contained it.
- Implemented in C++ (500 code lines)
- I designed a deterministic finite automaton for the purpose of identifies every input and output.

Uber Eats Simulator – University Project (Object-Oriented Programming course) — 2020
An emulation of the famous app Uber Eats, where the user can order and pay for food.
- Implemented in C++ (1300 code lines)
- I used the concept of polymorphism, abstract classes and other basic concepts for OOP.

Mining Project Management – University Project (Object-Oriented Programming course) — 2019
An application to improve communication in the mining sector.
- Implemented in C++ (3000 code lines)
- Being my first Object-Oriented Project I designed an UML diagram and coded: inheritance, aggregation, and composition.

Typing Keyboard Gaming – University Project (Computational Thinking and Programming course) — 2019
A game where users type from the keyboard as the computer requests. Inspired by Piano Tiles and Guitar Hero.
- Implemented in Python (1000 code lines) with the Pygame library.
- The main idea is to help people increase their speed and made less mistakes on the keyboard. It is aimed at beginners and advance users.
- I implemented all the basic programing functions, such as: loops, conditionals, arrays, graphic interface, as many others.

SKILLS

PROGRAMMING LANGUAGES
Python, C, C++ (2 years of experience)
Matlab, R, Arduino, MIT app inventor (6 months of experience)
Scheme, Unity (2 months of experience)

LANGUAGES
Spanish – Native language
English – B1level /Toefl score 517 (2017)

AWARDS
I participated in "Olympiad Science Contest" in Physics and Chemistry categories - 2017
I won 1st place "High School app development" competition. - 2017
I obtained an 80% scholarship from Tecnológico de Monterrey.
I won 1st place in 10,000m "Queretaro municipal athletics competition" Juvenile Category – 2019

INTERESTS

I practice athletics as a long-distance runner for my university team.
I am interested in gardening and the environment.
I like to play strategic video-games, including: Chess, League of Legends, Age of Empires and Civilization.

UNNOFICIAL TRANSCRIPT

First Semester	**Grade**
• Elective Course Mathematics and Science (Mathematics and Data Science for Decision Making)	100/100
• Engineering and Science Modelling	97/100
• Computational Modelling of Movement	98/100
• Computational Modelling Applying Conservation Laws	97/100
• Mathematical Thinking I	100/100
• Analysis of the Structure and Properties of Matter	100/100
• Computational Thinking and Programming	100/100
Second Semester	
• Computational Biology Analysis	99/100
• Elective Course Ethics and Citizenship (Ethics and Psychology: From Self-Knowledge to Fullfillment)	93/100
• Physical Experimentation and Statistical Thinking	97/100
• Computational Modelling of Electrical Systems	97/100
• Computational Modelling of Electromagnetic Systems	89/100
• Intermediate Mathematical Modelling	100/100
• Statistic Analysis	100/100
• Modelling of Engineering with Computational Mathematics	99/100
• Object-Oriented Programming	100/100
Third Semester	
• Elective Course Social and Behavioral Sciences (Anthropology of the Body)	97/100
• Analysis of Differential Equations	100/100
• Implementation of the Internet of Things	100/100
• Programming of Data Structures and Fundamental Algorithms	100/100
• Modelling of Minimum Systems and Computational Architectures	99/100
• Analysis of Software Requirements	100/100
• Exploration Topic (Social Entrepreneurship)	98/100
Fourth Semester	
• Elective Course Humanities and Fine Arts (Art Appreciation)	100/100
• Device Interconnection	99/100
• Implementation of Computational Methods	100/100
• Analysis and Design of Advanced Algorithms	100/100
• Software Construction and Decision Making	In Progress
Fifth Semester	
• Modeling of Multi-Agent Systems with Computer Graphics	100/100
• Analysis and Design of Advanced Algorithms	100/100
• Integration of Computer Security in Networks and Software Systems	In Progress
• Elective Course Leadership, Entrepreneurship and Innovation (Anticorruption in Government, Firms, and Society)	In Progress