







Erick Castañeda Martínez

Software Engineer

 **Portfolio:** erickcm2k.github.io
 +52 55 59 43 62 58
 github.com/erickcm2k
 erickce40@gmail.com
 linkedin.com/in/erickcastanedamartinez
 telegram.me/erickcm2k

EDUCATION

Computer Engineering, B.S.

Superior School of Computer Sciences (ESCOM, IPN)

Aug 2018 – Jun 2023

Informatics, Technical Degree

Center of Scientific and Technological Studies #12 (IPN). During high school.

Aug 2015 – Jun 2018

MAJOR PROJECTS

CoronAImage

Dec2020

Web application where users upload a chest tomography and the app tells you if the patient is COVID19 positive or not.

- Designed and developed frontend the frontend using React.
- Styled using Chakra UI component library.
- Communicates with a Flask server created

Library Manager

Mar 2020

CRUD desktop application for managing library materials borrowing

- Using JDBC middleware for connecting Java application with a relational database (MySQL).

NFA String Validator

Mar 2020

Validates character strings receiving their NFA state-transition table.

- Console application built using C++.

Derivatives & Integrals Calculator

Nov 2019

Computes some derivative and integrals, receiving a symbolic string with the function.

- Graphical user interface created using PyQt5
- Calculations using SymPy

For a complete list of projects, please visit my **portfolio**: github.com/erickcm2k

SKILLS

CODING SKILLS

2 years:

- **JavaScript** (ECMAScript 2015+, focusing on React and Node)
- **C++** (11+ for competitive programming)
- **C**

1 year:

- **Python, Java**

6 months:

- **MATLAB, TypeScript**

TECHNOLOGIES & TOOLS

- HTML5, CSS3 (BEM, flex, grid, SASS), jQuery, Bootstrap, TailwindCSS.
- Node, SQL (MySQL, PostgreSQL), MongoDB (NOSQL), ReactJS, ChakraUI.
- Bash, Git, GitHub, Heroku, Vercel, GitHub Pages.

COURSES & APPRENTICESHIP

- **Udemy Student:** 3 MERN (MongoDB, Express, React, Node) stack related courses.
- **IBM Intro to DS:** Learning Pandas, NumPy, Matplotlib and SymPy.

Communities & Volunteering

DEVELOPER COMMUNITIES

Web Development Club

Feb 2020 - present

Students club where I'm learning frontend and backend development using Node and React.

Competitive Programming Club

Aug 2020 - present

Here we learn how to efficiently solve competitive programming problems using data structures and algorithms with the aim of competing on ACM ICPC.

VOLUNTEERING

Alimenta

Oct 2019

Participation in food collecting "Alimenta 2019". Collaboration with Mexican marines.

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EDUCATION

Superior School of Computer Sciences

Bachelor Degree in Computer Engineering

Graduating in December 2022

GPA XX/XX

National Polytechnic Institute

Associate Degree in Informatics

Spring 2014 - Fall 2014

WORK EXPERIENCE

Company

Software Engineer Intern

City, State, Country

August 2015 - Present

- Helped refactoring the client side web application by using React.js alongside Facebook's Flux data model;
- Heavily used npm famous JavaScript modules and learned about many Web Development good practices;
- Developed flax, a library for optimizing the workflow of a React.js + Flux based application development.

Company

Game Developer

City, State, Country

Summer 2014

- Developed a prototype of a multi-platform cognitive behavioral therapy RPG game using Cocos2d-JS engine.

Company

Quality Director

City, State, Country

June 2012 - June 2013

- Acquired leadership abilities by guiding the department to solve many internal business challenges;
- Taught the team VBA programming to incentive the creation of better management tools.

MAJOR PROJECTS

CoronAImage

School Project

2014 - 2016

A web application which allows users

- Designed frontend using ReactJS, hosted using Vercel.
- Collaborated with some parts of the backend; a REST API using Python, Flask.
- Image recognition system created using Python, Keras via Google Collab

COVID 19 – Tracker

Personal project

2015

A simulation of an online PaaS service infrastructure inspired by Heroku

- Implemented both a server to manage local VMs simulating the service and a SSH enabled Git server;
- Collaborated on a client CLI tool and a proxy middleware responsible for running Load Balancing algorithms.

Mad Ratz

2015

Battle game where players could implement their own character's fight strategies as an AI written in Python

- Built the match scene using Unity3D by playing simulated snapshots obtained from a Thrift service.

Nice Points

2014 - 2015

Facebook online 2-player turn-based famous game

- It has Cocos2d-JS, Facebook Graph API, socket.io and node.js in its core;
- The 1-player mode AI was written using the Monte Carlo algorithm.

Braille Printer

2013

A low cost braille printer prototype

- Led the Engineering team to win the second place at the Challenge Entrepreneurial Contest.

SKILLS

PROGRAMMING LANGUAGES

3 years: Java, JavaScript
2 years: C/C++, C#
6 months: Python, PHP, Matlab/Octave, VBA

TECHNOLOGIES

HTML, CSS, JQuery, Ember.js, node.js, Express, socket.io, redis.io, SQL, MongoDB (NoSQL), Git, Amazon Web Services (AWS), Heroku, VirtualBox, Cygwin, Unix/Bash, Android SDK, JUnit, Cocos2d-JS, Unity3D, Docker.
HTML, CSS(SASS, FLEX, GRID), Bootstrap, NodeJS, ReactJS, Git, Github

AWARDS

ONLINE COURSES

2nd Place Team at Microsoft College Code Competition (2015)
Honorable Mention in the National Physics Olympiad (2008/2009)

Algorithms: Design and Analysis Part 1 (Stanford, 2016), Mobile Applications to Android (UMD, 2014), Machine Learning (Stanford, 2013), Startup Engineering (Stanford, 2013), Gamification (UPenn, 2012) and Programming in Python (Rice, 2012)