

Miguel A. Avila T.

Systems Engineer (c) · Database Administrator · IT Technician

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"Make the difference, keep it simple."

Summary

My interests are Back-end, Front-end, Full-Stack development, Database Design, Software Architecture, and ML. Through these years I have honed a code refactoring and optimization skill under the KISS principle (keep it simple, stupid) because simplicity is the key to efficiency, scalability and maintainability. (Note that simplicity \neq mediocrity)

Portfolio

Programming Languages

- Octave
- PostgreSQL
- SQLite
- JavaScript
- MySQL
- Python
- LaTeX
- C#
- Java
- C++

Tools & Engines

- SoapUI
- NodeJS
- Postman
- Idea
- PyCharm
- VS Code
- Unity 3D
- Docker
- XAMPP
- Git
- StarUML

Frameworks & Stacks

- Django Rest Framework
- Django
- React
- Flask
- Spring
- WAMP

Operative Systems

- Fedora
- Linux Mint
- Ubuntu
- Windows

Languages

- Spanish — Native
- English — C1

Education

Universidad Santo Tomás

(Aug 2018 — PRESENT)

Systems Engineering Degree

Original Title: Grado en Ingeniería de Sistemas

Udemy

- Angular Material Ultimate Course
- Project Management Essentials: A practical approach
- The Complete Python 3 Course: Beginner to Advanced!

Platzi

- Linear Algebra with Python
Original Title: Algebra Lineal con Python
- Linear Algebra Applied to Machine Learning
Original Title: Algebra Lineal Aplicada para Machine Learning
- Mathematics for Data Science: Basic Calculus
Original Title: Matematicas para Data Science: Cálculo Básico
- Multivariable Calculus
Original Title: Calculo Multivariable
- Discrete Mathematics
Original Title: Matematicas Discretas
- Practical Fundamentals of Machine Learning
Original Title: Fundamentos Practicos de Machine Learning
- Fundamentals of Software Engineering
Original Title: Fundamentos de Ingeniería de Software
- Business Analysis for Data Science
Original Title: Analisis de Negocios para Ciencia de Datos
- OOP and Algorithms in Python
Original Title: POO y Algoritmos en Python

- Introduction to probabilistic thinking
Original Title: Introducción al Pensamiento Probabilístico
- Computational Statistics with Python
Original Title: Estadística Computacional con Python
- Intermediate Python
Original Title: Python Intermedio
- Linear Regression with Python
Original Title: Regresión Lineal con Python

Carlos Slim Foundation

- Front-end Developer
Original Title: Desarrollador Front-End
- Version Control
Original Title: Control de versiones
- Database Administrator
Original Title: Administrador de bases de datos
- IT Technical Analyst
Original Title: Analista técnico en TI
- IT Technician
Original Title: Técnico en informática

National Learning Service (SENA)

- Databases, Generalities and Management Systems
Original Title: BASES DE DATOS GENERALIDADES Y SISTEMAS DE GESTION
- Principles of Object Oriented Analysis and Design, Using the UML Standard
Original Title: PRINCIPIOS DEL ANALISIS Y DISEÑO ORIENTADO A OBJETOS, UTILIZANDO EL ESTANDAR UML
- Software Quality Application in the Development Process
Original Title: APLICACION DE LA CALIDAD DEL SOFTWARE EN EL PROCESO DE DESARROLLO

- Quality in the Software Development
Original Title: CALIDAD EN EL DESARROLLO DE SOFTWARE
- Web development with PHP
Original Title: DESARROLLO WEB CON PHP

Nuestra Señora del Rosario - Tunja

- High School

Projects

hydro-wave-visualizer

(Jun 2021) Six real valued wave functions of the hydrogen atom (1s, 2s, 2p, 3s, 3p, 3d) are analyzed respect its convergence with the MonteCarlo integration method, then plotted using an implementation of the stochastic method via matplotlib.

Link:
<https://github.com/sesjehen-vestha-kxall/hydro-wave-visualizer>

hard-cs-and-se-problems

(Dec 2020) A collection of problems which from an standard point of view are hard (really) along with some resources.

Link:
<https://github.com/sesjehen-vestha-kxall/hard-cs-and-se-problems>

Research and Writings

Numerical Simulations of Probability Distributions for the Hydrogen's Atom Wave Functions

Author & Researcher (Nov 2020)

Topics: *Quantum Physics, Electric Physics, Numerical Methods, Simulation, Visualization.*

Personal References

First Name Last Name

Title.
(+XX) XXX XXX XXXX

%%% NOTE: This resume doesn't represent my full
%%% CV and excludes private information.