# Oscar Andrés Rosas Hernandez



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## Education

IPN - Escuela Superior de Cómputo / Bachelor's degree in Computer Systems Engineering Top ranked student for 5 consecutive semesters. Participant of the university. ACM Student Chapter (better known as "Club de Algoritmia ESCOM") for the last 4 semesters.

August 2016 - May 2020 GPA 92 out of 100

### UNAM - Faculty of Science / Bachelor's degree in Computer Science

Sophomore, learning about the theoretical part of computer science and especially learning hardcore math: calculus, number theory, graph theory, set theory and numerical analysis.

August 2017 - December 2022 GPA 92 out of 100

#### IPN - CECyT 9 / Technical career in Digital Systems

During my high school years I did a technical career in digital systems where I learned about microcontrollers, digital and analog electronics and low level programming in C and assembly. August 2016 - May 2020 GPA 87 out of 100



# **Projects**

CompilandoConocimiento.com - Personal education project: blog and algorithms reference Since December 2016 Creator of a blog about discrete math, physics and algorithms, the project has around 50 000 views this year.

- Topics range from pots and implementation of basic data structures like stacks and AVL tree, automata theory and implementation of Turing machine, intro to C and to object oriented programming using Java.
- Author of 6 little books in Spanish about the bases of Number Theory, Complex Analysis, Discrete Math, Statistics, Linear Algebra and intro to Databases which have been downloaded around 8,000 times.
- Author of a competitive programming reference website: CompilandoConocimiento.qithub.io/Reference/
- Author of a repository of solutions for many online judges problems like UVa, Codeforces and OmegaUp.

#### **TdeTiendita** - Point of sale system

May 2018

Creator of a simple point of sale system using React-Flask-MySQL to administer the local business of my family. I develop all the system, from the design of the database to the implementation of the frontend and backend.



# **Work Experience**

Web Maintainer intern / Faculty of Architecture, UNAM

November 2016 - July 2017, México City

- Maintained, updated and rewrote part of the codebase of the student's website especially redesigning the signup process for classes using MaterializeCSS and JQuery finishing with a more intuitive and modern interface.
- Fixed some rather obvious sql injections vulnerabilities and rewriting some back-end scripts using PHP.
- Fixed occasionally hardware problems with the servers.

#### Auxiliar Teacher / Centro Escolar Acozac

January 2014 - January 2015, Acozac, México State

Auxiliar professor in elementary math in a private group of 10 students at CEA Junior High.



## Programming Languages

3 years: modern C++ 11/14/17; C.

1 vear:

JavaScript (ES2015), specially around the React ecosystem Java and Kotlin (also basic idea of creating basic android apps). PHP7; Python3.

LaTeX, mainly around math and computer science.

6 months: Dart (and the Flutter SDK); MySQL



#### Awards

- Participant of the Grant Prize of Mexico ACP-IPC 2017, finalized in place 91 of 404 teams.
- Third place in the 2018 annual programming contest "Donald Knuth" at **ESCOM IPN** University.
- Student of Academic Excellence for the last 5 semesters at ESCOM - IPN university

## **Technologies**

HTML5, CSS3, Typescript, MaterializeCSS, jQuery, React, NodeJS and npm, Android SDK, webpack, babel, Flutter SDK, Github.

Unix / Bash. MySQL, Flask.

# **Courses and Certifications**

- Flutter certification by the GDG UNAM (Google Development Group UNAM) from June to July of 2018
- UNAM Mobile course: Intro to Kotlin for Android development on August 2018
- **B2** English certification by the Instituto Politécnico Nacional and KET certification by the Cambridge English Qualifications.