Mauricio Carrasco Ruiz

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Education

BSc in Computer Science 2017-2022

School of Sciences, National Autonomous University of Mexico (UNAM), Mexico City, Mexico.
Graduated with a grade of (9.77/10), corresponding to a 4.0 GPA.
In Process of presenting the thesis defense.

Computer Technician 2016-2017

Specialized Technical Studies, UNAM, Mexico City, Mexico.
Graduated with honors.

Experience

Teacher Assistant Level "A" and "B" August 2021 - February 2023

School of Sciences, UNAM

Taught two hours per week in the classroom as a complement to the three hours peer week corresponding to the professor of the subject, in addition to grading and designing assignments, excercises and exams, among others. Courses taught:

Graphs & Games	Semesters 2021-1, 2021-2, 2022-1, 2022-2, 2023-1. Introductory course to the Graph and Game Theory, where the main subject of study are the math structures known as Graphs and its properties.
Linear Algebra I	Semester 2023-1. Introductory course to the Linear Algebra, where the main subject of study are vector spaces and linear transformations.
Graph Theory	Semester 2020-4. Intermediate course of Graph Theory, where the main subject of study are the concepts of connection, eulerian paths, matching, colouring, and planarity.

SNI Level III Reasearcher Assistant September 2018 - August 2019

National Council of Science and Technology (CONACYT)

Collaboration with the Center for Genomic Sciences of the UNAM, where I was responsible for the development of a Java pipeline known as Graphene2Gephi, which is able to extract a knowledge-graph given the context provided by Graphene, a tool which uses Natural Language Processing techniques, and in this way visualize in a more user-friendly way the most informative content of the biomedical literature.

Jr. PHP and JavaScript Back-End Developer March 2017 - October 2017

National Preparatory School No. 6, "Antonio Caso"

Development and maintenance of the CRUD web application responsible for the management of schedules and administration of subjects and schools.

Jr. Laravel PHP Full-Stack Developer June 2016 - November 2016

Social Service performed at the Faculty of Engineering, UNAM

Development of an administration system for the *Palace of Mines International Book Fair* where I developed the views that where shown to the client as well as its proper working with the data base.

Publications

Papers

1. Arroyo Fernández Ignacio, **Carrasco Ruiz Mauricio**, and Arias Aguilar José Aguilar. *On the Possibility of Rewarding Structure Learning Agents: Mutual Information on Linguistic Random Sets*, Workshop on Sets & Partitions, NeurIPS, October 2019.

2. Arroyo Fernández Ignacio, Forest Dominic, Torres Moreno Juan Manuel, **Carrasco Ruiz Mauricio**, Legeleux Thomas and Joanette Karen, "Cyber-bullying Detection Task: The EBSI-LIA-UNAM system (ELU) at COLING'18 TRAC-1" at the *27th International Conference of Computational Linguistics (COLING 2018)*, August 2018.

Books

1. **Digital Heritage: Computational Methods and Interactive Mediums to Study and Divulge the Cultural Heritage**, *Jiménez Badillo Diego, Arroyo Fernández Ignacio, Méndez Cruz Carlos Francisco,* ***Carrasco Ruiz Mauricio****, et al.*, Instituto Nacional de Antropología e Historia, Secretaría de Cultura, 262 p.

   ISBN : 978-607-539-597-5

Talks

Conferences

1. Arroyo Fernández Ignacio, **Carrasco Ruiz Mauricio**, y Méndez Cruz Carlos Francisco, "Natural Language Processsing in the conservation of the cultural heritage: a knowledge-graph of the Popol Vuh.", *Tercer Coloquio: Desarrollo Tecnológico al Servicio del Patrimonio Cultural*, Mexico City, Mexico, October 2018.

Research Stays

- **Center for Genomic Sciences, UNAM**, 2018.

  Research stay to study Natural Language Processing (NLP) and its application on the search for relationships between proteins and genes, and its relation with diseases and mutation contained in scientific papers.

- **Applied Mathematics and Systems Research Institute, UNAM**, 2017.

  Short research stay to study Evolutionary Computation and its most significant algorithms; a techincal report and a scientific poster were written to share the results.

Acknowledgements and Awards

- First place in the Object-Oriented Programming module of the *Concursos Interpreparatorianos*, 2017. (Annual competition held by UNAM where all the UNAM incorporated high-schools participate).

- Second place in the Informatics and Technology category of the *Concurso de Informes Técnicos de Estancias Cortas*, 2017. (Annual Competition held by UNAM where students participate by writting a technical report about the activities done in a summer internship collaborating with a researcher).

- Second place in the robotics category of the *25th Concurso Universitario: La Feria de Ciencias, La Tecnología y La Innovación*, 2017. (Fair Science held by UNAM).

- Participated in the *XVII Muestra Científica de Estancias Cortas*, 2017. (Annual Event held by UNAM where students show the results they obtained in research stays).
- First generation of the *Taller de Ciencias para Jóvenes en Mérida* held by the Mathematics Research Center, UNAM. (Winter internship where participants get to meet and work with multiple researchers).

Academic Projects

- **H2O al Cubo**, 2017.

  Design, construction and programming of an aquatic robot built using recicled materials to recolect trash found on lakes and lagoons, it's controlled using an Android App and an Arduino device.

- **PREPArados**, 2016.

  Developed a web application game to improve the performance of the National Preparatory School students, which was implemented via Sails.js.

Skills

Programming Languages	Java, C/C++, Python, PHP, JavaScript, and Go.
Operating Systems	Linux (Ubuntu, Arch Linux), Windows.
Miscellaneous	Web development (HTML, CSS, SVG, JQuery, node.js), database administration (POSTGRES, MariaDB, SQLITE, MySQL), Git, Unix/Bash, frameworks (Django, Sails.js, Laravel PHP), and LaTeX.

Languages

Spanish	Native Speaker
English	C1