Albert M. Orozco Camacho

I have a broad spectrum of interests in AI: from the theoretical foundations of deep learning to applications regarding NLP, chatbots, and social networks. My current goals are directed towards enhancing how humans and machines communicate and understand themselves, as well as providing elegant models for such tasks.

Personal Details

Date of birth July 16th, 1994

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Areas of Interest

- Network Science
- Natural Language Processing
- Representation Learning
- Deep Learning for Information Spread

Education

2019– **Master of Science Degree**, *McGill University*, Montréal, Canada, Supervised by Prof Reihaneh Rabbany.

Computer Science

- 2012–2017 **Bachelor of Science Degree**, Facultad de Ciencias, Universidad Nacional Autónoma de México (UNAM), Mexico City, México, GPA 8.82 / 10 .

 Computer Science
 - Attended the 2015 Jelinek Summer School on Human Language Technologies, Summer school, It was a 2-week introductory summer school on cutting-edge topics about speech recognition, machine learning, and natural language processing, It was held at the University of Washington, Seattle.

 Received a scholarship from The North American Chapter of the Association for Computational Linguistics (NAACL) to attend the summer school.
- 2009–2012 **High School**, Prepa Tec de Monterrey, Campus Guadalajara, Guadalajara, Jalisco, México, $GPA-91\ /\ 100$. Secondary School Certificate

Theses

BSc. Automatic Generation of Internet Memes using a Deep Neural Network. Faculty of Sciences, UNAM. pp. 111.

Publications

2016 LIPN-IIMAS at SemEval-2016 Task 1: Random Forest Regression Experiments on Align-and-Differentiate and Word Embeddings penalizing strategies.

Lightgow, O. , Meza, I. , Orozco, A. , Garcia-Flores, J. y Buscaldi, D. Proceedings of the 10th International Workshop on Semantic Evaluation (SemEval-2016) pp. 726-731.

2014 The Golem Team, RoboCup@Home 2014, Technical Report.

Pineda, L., Rascon, C., Fuentes, G., Estrada, V., Rodriguez, A., Meza, I., Ortega, H., Reyes, M., Peña, M., Duran, J., Campos, E., Chimal, S. y Orozco, A. DCC, IIMAS, UNAM pp. 8.

Current Research

- 2019— Dynamic Link Prediction for Troll Activity Tracking, Individual Research, suppervised by Reihaneh Rabbany, Using state-of-the-art graph embedding techniques, I am approaching the problem of modelling the activity of fake accounts/Twitter bots from a link prediction perspective. Furthermore, results may help to conclude on likely strategies for the expansion of these accounts towards a common goal.
 - 2020 **Online Knowledge Graph Learning**, *Team Member*, Collaborating with Nishant Mishra, Paniz Bertsch.
 - 2019 **Extending Question Answering to Conversations**, *Team Leader*, Collaborating with Akshatha Arodi, Yao Jiang.
- 2019 **FakeNews Detection**, *ML Algorithm Research Engineer (?)*, Collaborating with Jackie Cheung, Reihaneh Rabbany, Meng Cao, Junghao Wang, Mila team at the https://leadersprize.truenorthwaterloo.com/en/ for fake news detection.

Workshops

- 2018 **Poster speaker at LatinX in AI**, *Conference presentation*, I will present a poster at first ever LatinX in AI workshop, as part of NIPS. It will be held in Montréal, QC, Canada, The workshop's main goal is to provide a common framework for Latin American AI researchers.
- 2018 **Poster speaker at SOCML 2018**, *Conference presentation*, I will present a poster at the third Self-Organizing Conference on Machine Learning. It will happen at the Google offices located in Toronto, ON, Canada, The poster will mainly cover advances and challenges on meme captioning using deep neural networks.
- 2017 **Poster speaker at SOCML 2017**, *Conference presentation*, I presented a poster at the second Self-Organizing Conference on Machine Learning, held at the Google offices located in Sunnyvale, CA, USA. The poster was about my undergraduate thesis project (deep meme captioning). The conference was organized by Ian Goodfellow, The poster can be visualized here.

2017 Invited speaker at CoLiCo held at UNAM Facultad de Filosofía y Letras, Outreach talk, I spoke about deep learning applications to NLP, from a linguistic perspective, CoLiCo stands for "Computational Linguistics Colloquium" and was organized by UNAM Linguistic Engineering Group.

The slides are available in https://alorozco53.github.io/talks/onto_memes.html

Talks

- 2017 Invited speaker at UNAM Google Developer Group's meetup and IPN ESCOM, Outreach talk, I spoke about my undergraduate thesis project and the lessons I learned during the coding part.
 - The slides are available in https://alorozco53.github.io/talks/lessons.html
- 2017 In March, I was invited to talk at "Bots LATAM" community, whose goal is to gather the most enthusiastic people in AI and Chatbots together in Mexico City, Outreach talk, The talk was given in Spanish and its title was "Implementando ojos a tu chatbot".

The slides are available in https://alorozco53.github.io/talks/eyes_on_bot.html

Internships and Professional Experience

- 2019- Research Student at Mila Québec Al Institute, Supervised by Prof Reihaneh Rabbany, Working on the intersection of network science, NLP and within the graph representation learning scope.
- 2020- **Teacher Assistant at McGill University**, *Currently part of the teaching staff for course COMP 302: Programming Languages and their Paradigms*, The course instructor is Prof Prakash Panangaden.
- 2017-2019 **Data Scientist at Mariachi IO**, *Paid Job*, I joined *Mariachi IO* to help out in the solution of several tasks that require NLP, machine learning, and image processing, I am currently building a computer vision application using classic OpenCV-based algorithms and state-of-the art deep learning tools.
- 2017-2019 **Data Science Consultant at Fractal Abogados**, *Paid Job*, *Fractal Abogados* is a startup whose purpose is to provide feasible IT (and AI) solutions into today's Mexican (and Latin American) law system, I work as an AI consultant in Fractal's signature project: a legal chatbot. *Max* is a Facebook Messenger based virtual assistant, powered by IBM Watson that automates the most common legal advices in Mexico.
- 2016-2018 Teacher assistant the UNAM's Facultad de Ciencias, Paid Job, Taught Machine Learning and Pattern Recognition and Automata and Formal Languages during 2017. Taught the Programming Languages during the 2016 Spring Semester. Taught Discrete Structures Lab and Computational Logic during the 2016 Fall Semester. All courses are offered for the undergraduate curriculum, I will be teaching Computational Logic again this Spring 2018 semester.

- 2013-2015 **Student / researcher at UNAM's** *Grupo Golem*, *Extra-curricular activity*, Grupo Golem is a research group at IIMAS (Instituto de Investigaciones en Matemáticas Aplicadas y en Sistemas) whose main goal is to model the cognitive interaction between a humans and computer; all the research is unified in a service robot that competes internationally in the RoboCup@Home competition; the group's website is this one, Grupo Golem's leader is Dr Luis A. Pineda.
- 2012-2013 **Student / researcher at UNAM's IIMAS's Computer Science Department**, *Extra-curricular activity*, I work alongside Dr Ivan V. Meza with speech recognizers, and replicated an experiment in which a robot learns from a human teacher how to transform babblings to simple English words.

Other Activites

2017 Attended a NLP hackathon (*Gilkatón*) organized by UNAM's Grupo de Ingeniería Lingüística, *Hackathon*, Held in Mexico City at the Engineering Tower, UNAM, Alongside two linguists, we created a program to extract relevant information from a corpus of legal documents.

The code developed can be found here: https://github.com/alorozco53/Gilkaton.

- 2017 Attended an Al-Chatbot Hackathon organized by Synx and Recime, Hackathon, Held in Tlaquepaque, Jalisco, Mexico at ITESO.
 Alongside three friends, I helped developing a NLP module for a chatbot that tracks the user's food quality and exercising activites.
- 2017 **Volunteer in Technovation Challenge**, *Volunteering*, This event's focus is to encourage programming and entrepreneurship in Secondary School girls. During one of the regional knockout events, I helped out with logistic issues; it was held during May at Mexico City.
- 2016 Participated in the second annual "Jakatón" (computational linguistics hackathon), Hackathon, Held in Cholula, Puebla, Mexico.
- 2015 **Participated in Mexico's first computational linguistics hackathon**, *Hackathon*, I teamed up with a friend of mine to be finalists and obtained an honor's award.

Languages

Spanish Mothertongue

English **Bilingual proficiency**

French Full professional proficiency

Completely fluent (IELTS)

Fluency mostly written (DELF B1)

Skills

Programming Languages and Software known:

- Java
- C
- Haskell
- Prolog
- C++
- SciPy
- R

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Sci-kit LearnNLTKOpenCVspaCyMatplotlibPostgreSQL

Additional Software

LATEX
 Microsoft Office
 CMU Sphinx voice recognizer
 Git version control system
 IBM Watson
 Keras
 Amazon AWS
 GNU Emacs
 Tensorflow
 ScraPy
 Theano
 Javascript
 Bash (Shell)
 Google Cloud

Personal Skills

- Ability to tackle complex problems.

- Ability to abstract the most important features of a given task.

- Critical thinking.

- Ability to work under pressure

- Provide efficient programming solutions to any problem.

Hobbies

- Science-fiction - Robotics

- Soccer - American football

- Science (in general) - Exercising