

# JAVIER SALES-ORTIZ

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## EDUCATION

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### M.Sc. Computing Science (Thesis based)

University of Alberta

Fall 2021 - Present

Edmonton, Canada

**Research Areas:** Optimization, Control and Machine Learning for Renewable Integration in the Electricity Grid

### B.Sc. Engineering in Mechatronics and Production

Iberoamerican University

2015 - 2020

Mexico City, Mexico

Received *Academic Excellence Award* – Highest GPA of graduating class.

### Study Abroad Program

University of New South Wales

Fall Semester 2017

Sydney, Australia

Relevant Courses: Foundations of Concurrency, Microprocessors and Interfacing.

## WORK EXPERIENCE

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### Graduate Teaching Assistant

University of Alberta

Sep. 2021 - Present

Edmonton, AB

- Designed lab. assignments as part of a team effort with other TA's. Focused on applying the course concepts in a challenging and approachable setting. Specifically, controlling a simulation of a robotic arm in MATLAB.
- Presented seminars and lab. lectures to groups of up to 70 upper-year Comp. Sci. undergraduates in the Numerical Methods course, in-person and online modalities.
- Guided students individually in preparation for course exams and assignments, reinforcing their study habits with "learning how to learn" techniques.

### Junior Data Scientist

Intelimetrika

Nov. 2020 - Jul. 2021

Mexico City

- Conducted research on new algorithms to detect operation critical events on timeseries geospatial data. Used to expand the functionality on a commercial vehicle routing and monitoring platform.
- Automated data quality reports regarding the creation and maintenance of an Azure Data Lake. Valuable tool for communicating progress to the client.
- Contributed to large existing codebases using version control software (BitBucket), and collaborating with teammates using the SCRUM development framework.

### Junior Consultant, Data Science

Management Solutions

Feb. 2020 - Nov. 2020

Mexico City

- Evaluated performance and verified the implementation of high impact prediction and decision models used for personalized credit card offerings for a multinational Spanish banking firm.

### Database Volunteer Internship

Yomol A'tel

Summer 2019

Chilón, Chiapas, Mexico

- Served as a volunteer for a small coffee cooperative supporting local indigenous communities in south Mexico.
- Ground-up development of a database system that centralizes the organization's information in order to generate KPI's and aid the executives' decision-making process.

### Undergraduate Research & Teaching Assistant

Iberoamerican University, Institute of Applied Research and Tech. (InIAT)

Jun. 2016- Dec. 2019

Mexico City

- Responsible for conducting experimental tasks such as programming embedded systems on mobile robots, automation of result recording, construction and maintenance of physical prototypes.
- Co-author and presenter of robotics conference paper in IEEE International Midwest Symposium on Circuits and Systems in Dallas, USA on August 2019: "*Leader-follower Strategy based on Distance and Heading Angles using Local Vision*". DOI: 10.1109/MWSCAS.2019.8885046.

## PROFESSIONAL DEVELOPMENT

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- **AI Career Accelerator Participant (Amii, Edmonton AB, 2022):** Contributed 60+ hours of work-integrated learning by developing code demonstrations for an online Machine Learning course focused on best practices such as recording experiments, creating pipelines, connecting to databases and deploying to cloud services (AWS).
- **Fundamentals of Reinforcement Learning by University of Alberta (Coursera, 2021):** On the theory and practice of studying agents. Topics including: Markov Decision Processes, value functions and multi-armed bandits.
- **Machine Learning by Stanford University (Coursera, 2019):** On the main models: Regression, SVM's Neural Nets, and assignments on spam classifiers, optical character recognition and recommender systems.

## TECHNICAL SKILLS

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### Programming

Python, MATLAB, C

### Python Libraries

Tensorflow, Pytorch, Sci-kit Learn, Pandas, Matplotlib, Cvxpy

### Databases

MySQL, PySpark, SAS, MS Access

### Software

Linux terminal, Git/GitHub, Jupyter Notebooks, MLFlow