# Alejandro **Álvarez**

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## Education

### Carnegie Mellon University, Heinz College
*Pittsburgh, PA*

MASTER OF INFORMATION SYSTEMS MANAGEMENT - BUSINESS INTELLIGENCE AND DATA ANALYTICS · *December 2021 (expected)*

- Candidate, Class 2021.
- Core Coursework (Fall 2020 - Spring 2021): Database Management, Object-Oriented Programming, Unstructured Data Analytics, Statistics for IT Managers.

### Instituto Tecnológico Autónomo de México
*Mexico City, Mexico*

BACHELOR OF SCIENCE IN APPLIED MATHEMATICS · *October 2015*

- Graduated with honors. Thesis work: "Random Variants of the Kaczmarz Method", 2015.
- Coursework: Numerical Analysis, Linear Programming, Numerical Optimization, Applied Statistics, Linear Algebra, Real Analysis, Functional Analysis, Measure Theory; Applied Data Science Workshop at Carnegie Mellon University (Fall 2015).
- Leadership: Adjunct Faculty Member of the Probability and Statistics Department (Spring 2015); Adjunct Faculty Member of the Mathematics Department (Spring 2013 - Fall 2014).

BACHELOR OF ARTS IN ECONOMICS - ECONOMIC THEORY · *July 2015. Pending graduation*

- Coursework: Consumer and Producer Theory, General Equilibrium Theory, Game Theory, Macroeconomics (General Equilibrium), Dynamic Macroeconomics. TA for Industrial Organization.

## Project Experience

### SAI Law & Economics

ECONOMIC SPILLOVER OF AN IMPORTANT DRINK MANUFACTURER · *2019*

- Gathered information of sales, employees and supplies purchases of 11 companies in 32 states in Mexico. Designed a relational database to store the gathered information. Developed an internal R package to implement Input-Output methodologies. Delivered results through an R Bookdown.

UPGRADE OF ANALYTICS' TOOLS · *2016 - 2019*

- Led and implemented the switch of the analytics' tools of the Economic Consulting Team, from 100% MS Excel usage to 100% R usage.

### University of Pittsburgh Medical Center - Carnegie Mellon University

PHARMACEUTICAL INVENTORIES' OPTIMIZATION · *Summer 2015*

- Developed a predictive algorithm to optimize pharmaceutical inventories from hospitals, based on the patients' flow.

## Skills

PROGRAMMING

- R (package development with devtools), Java (and Git for version control).

DATABASE MANAGEMENT, STATISTICAL ANALYSIS AND DATA VISUALIZATION

- R (tidyverse, shiny, plotly), SQL (MySQL).

REPRODUCIBLE DOCUMENTS

- R (Markdown, Bookdown)

## Experience

### SAI Law & Economics - Economic Consulting Team
*Mexico City, Mexico*

SENIOR ASSOCIATE · *July 2016 - July 2020*

- Team Manager, Strategic Planning, Project Manager, Statistical Analysis, Data visualization, Database Design, Economic analysis.
- Promoted less than a year before the previous promotion. Senior Associate with the highest tenure in the firm since 2017.

JUNIOR ASSOCIATE · *October 2015 - June 2016*

- Project Management, Data Cleansing and Visualization, Statistical Analysis, Economic analysis.
- Promoted immediately after graduation.

FULL-TIME ECONOMIC ANALYST · *June 2014 - September 2015*

- Data Cleansing, Analysis and Visualization, Statistical Analysis, Economic Analysis.