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)*

- 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 (GRADUATED WITH HONORS)   *October 2015*

- 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).
- Adjunct Faculty Member of the Probability and Statistics Department (Spring 2015) and 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, Dynamic Macroeconomics.

Project Experience

SAI Law & Economics

ECONOMIC SPILLOVER OF AN IMPORTANT DRINK MANUFACTURER   *2019*

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

UPGRADE OF ANALYTICS' TOOLS   *2016 - 2019*

- Led and implemented Economic Consulting Team's toolbox migration, from 100% MS Excel usage to 100% R usage, which allowed the firm and the team to take high-profile projects which otherwise wouldn't have took. Actively trained firm's Partners, Junior Associates, and Analysts, in the usage of R Programming Language. Self-taught to programming with R.

UPMC Enterprises - Carnegie Mellon University

PHARMACEUTICAL INVENTORIES' OPTIMIZATION - TEAM CAPSTONE PROJECT   *Summer 2015*

- Developed a predictive algorithm with Python to make projections about the drugs needed to be purchased, based on the patients' visits and medical records, which consisted in estimating multivariate distributions to find the optimal quantities in terms of a loss function.

Skills

PROGRAMMING

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

DATABASE MANAGEMENT, STATISTICAL ANALYSIS AND DATA VISUALIZATION

- R, Python, SQL (MySQL).

REPRODUCIBLE DOCUMENTS

- R Markdown, Jupyter, LaTeX. Notions of HTML, CSS, XML.

Experience

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

SENIOR ASSOCIATE   *July 2016 - July 2020*

- Directly managed +50 projects, in charge of their strategic and methodological planning, and their technical execution (Statistical Analysis, Data visualization, Database Design, Economic analysis). Participated in +100 projects for +100 clients. Billed +1.1 Million USD. Coordinated the JA's and BA's team. Senior Associate with the highest tenure in the firm since 2017, and with the shortest period as Junior Associate in firm's history.

JUNIOR ASSOCIATE   *October 2015 - June 2016*

- Managed +10 projects and participated in +20 projects. Supervised and improved teams' usage of tools and technics for data cleansing and visualization, and statistical and economic analysis. Immediately promoted after graduation.

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

- Participated in +30 projects. Pioneered the use of R Programming Language.