

Ilan Reinstein, M.S.

[Github](#), [Portfolio](#)

Education

Master of Science in Applied Physics, September 2015 - May 2017

New York University Tandon School of Engineering, Brooklyn, NY

Bachelor of Science in Physics, January 2009 - March 2014

Universidad de Los Andes, Bogotá, Colombia

Skills and Other Information

- Programming: Python, R, SQL (Oracle, MySQL), Stan, Linux, Git
- Languages: Spanish (fluent), English (fluent)
- Completed CITI Certification – Social/Behavioral Research Course
- Dual Citizenship: Colombia – Germany

Additional Coursework

Introduction to Bayesian Inference with Stan, Nov 2018, New York, NY

Applied Statistical Modeling with Stan – NYU Steinhardt, Spring 2018, New York, NY

StanCon – Cambridge, UK, August 2019

Professional Experience

Institute for Innovations in Medical Education, New York University's School of Medicine, New York, NY

Associate Research Scientist, April 2018 – Present

- *Project: Artificial Intelligence (AI) for Admissions Screening*. Develop and deploy Machine Learning models to automate and optimize the screening of thousands of (10k+) applications for admission into Medical School and subsequent residency programs. The human effort and the time spent in reviewing application was reduced by over 70%
- *Project: Natural Language Processing (NLP) for Admissions Screening*. Conceptualize, develop and maintain frameworks to extract and process unstructured information from approx. 8k statements of purpose and letters of recommendation, to uncover patterns across applicants to NYU School of Medicine. Deploy and experiment with different models from simple bag of words to Word Embeddings (Word2Vec), and other NLP techniques using Python to predict screening outcomes.
- *Project: Student Performance and Risk Prediction*. Build and deploy Machine Learning frameworks to measure and assess medical students' learning efficiency and to identify risk factors. The outcome of the predictions helped faculty find teaching challenges to develop student-specific feedback and monitoring
- *Project: NYU Langone Datathon*: Collaborated with a team of statisticians and physicians from the Intensive Care Unit (ICU) to develop a statistical model that would determine factors of risk and survival in patients that suffered from cardiac arrest while in the ICU. Third place out of 8 teams
- *Project: Modeling Learning During Deliberate Practice of Visual Diagnosis*. Analyze big data obtained from three research studies conducted to understand the challenges and the difficulty of the decision-making process involved when evaluating ECG readings. The product of the project is an algorithm capable of generating personalized predictions and difficulty recommendations for each participant in the study
- *Project: Adaptive Learning Algorithm for Electrocardiogram (ECG) Teaching*. Launched and integrated a statistical algorithm into a web-based ECG case simulator to capture and analyze the subject's responses in real-time, and to provide feedback on performance

KDnuggets, Brooklyn, NY

Data Journalism Intern, September 2017 – February 2018

- *Project: [Original Content](#)*. KDnuggets is the leading site on Data Science, Machine Learning and AI. As an editorial intern I independently authored and edited original content ranging from educational and explanatory articles about advanced algorithms to simple descriptive reports about current trends and new discoveries in the Big Data and Analytics field
- *Project: Guest Content*. The project consisted in editing, reviewing and republishing outside articles on KDnuggets site

Inter-American Development Bank (IADB), New York, NY

Data Visualization Consultant, August 2017 – February 2018

- *Project: Interactive Data Visualizations.* Using data from annual reports, research centers and publicly available data, the project consisted in developing and designing an interactive visualization tool using Javascript's D3 library. The tool was used by the Renewable Energy, and Oil and Gas groups. This project consisted in enhancing the outreach and communication of achievements both within and outside of the institution as part the IADB's effort to implement and increase the usage of renewable energy, and to drive sustainable energy policies in Latin America.

Bayesquare Foundation, New York, NY

Machine Learning Research Assistant, July 2017 – October 2017

- *Project: Machine Learning and Economic Policy.* Developed and applied Machine Learning software to financial and economic data determine novel technological approaches to economic policy such as interest rate decisions
- *Project: Cities with High Crime Rates.* Analyze and implement a statistical model capable of identifying relevant factors that drive crime in large cities across the US

Urban Observatory, Center for Urban Science + Progress, Brooklyn, New York University, NY

Research Assistant, January 2017 – June 2017

- *Project: Visible Building Emissions Detection.* Designed and developed software to analyze a big data base of 70k images to automate image processing, filtering, feature extraction, and eventually detection of smoke and vapor emissions from buildings across NYC skyline. Conducted literature reviews on Computer Vision, Anomaly Detection and Time-Series

Universidad de Los Andes, Physics Department, Bogotá, Colombia

Assistant Professor, January 2015 – May 2015

- *Courses: Pre-Physics, Physics 101, Physics 102.* Weekly sessions addressed to 60 engineering and science students across all three courses to work on problem-solving techniques and assignments

Aentrópico, Bogotá, Colombia

Jr Data Scientist, April 2014 – November 2014

- *Project: Automated Visualization Packages.* Developed, designed and integrated automated software into the ready-to-use web application to perform cleaning, aggregation, visualization and analyses of data from clients
- *Project: Data and Business blog.* The project consisted in using the company's software platform to publish brief data analysis reports as blog entries to showcase and outreach to new customers
- *Project: General Consulting.* Conducted personalized and customer-specific statistical analysis to advise on best data gathering, reporting and modeling of their data

Universidad de Los Andes, Physics Department, Bogotá, Colombia

Teaching Assistant, January 2011 – Dec 2013

- *Clinic for Problem Solving in Physics:* Supported students from engineering and science with their weekly assignments from intermediate and advanced physics courses