

# Eduardo Blancas Reyes

Software engineer with strong Machine Learning background and experience contributing to open source projects.

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<https://blancas.io>

<https://github.com/edublancas>

## Education

### Columbia University

Aug 2017 - Dec 2018 (Expected)

M.S. in Data Science. Fulbright Scholar.

Coursework: Computer Systems, Machine Learning, Probabilistic Programming, Robustness and Security in ML, Applied Deep Learning.

### Universidad Nacional Autónoma de México (UNAM)

Aug 2016 - Jun 2017

Graduate Certificate in Applied Statistics (one-year program of graduate coursework)

Coursework: Statistical Inference, Sampling, Multivariate Analysis, Regression Models and Bayesian Inference.

### Instituto Tecnológico y de Estudios Superiores de Monterrey (ITESM)

Jan 2011 - May 2015

B.S. in Mechatronics Engineering. Graduated with honors.

## Experience

### Columbia University (Department of Statistics)

New York, NY

Research Assistant (Advisor: Liam Paninski)

Sep 2017 - Dec 2018

- Maintainer of **YASS**: an open source library for Computational Neuroscience
- Develop high-performance algorithms for processing Larger-than-Memory datasets (NumPy, SciPy, scikit-learn)
- Improve existing code: optimization using benchmarking and profiling tools, parallelization using the multiprocessing library and NumPy parallel operations
- Use Deep Learning for neural activity detection and classification (TensorFlow, Keras), GPU training using Google Compute Engine
- Worked with the research team to turn YASS old codebase into a tested, organized and documented Python library

### Krieger

Mexico City, MX

Lead Backend Engineer

Jun 2016 - Aug 2017

- Oversaw backend development across projects to ensure code quality, performance and reliability
- Developed internal software tools that are used in several ongoing projects (input validation, software versioning, deployment, user permissions). These tools have reduced development time and increased team's productivity
- Developed web services using Python (Flask) and deployed them using Google App Engine, Cloud Datastore and Cloud Storage
- Engineered a data pipeline to perform entity resolution using Apache Airflow

### University of Chicago (Center for Data Science and Public Policy)

Chicago, IL

Data Science Fellow (Advisor: Rayid Ghani)

May 2015 - Jun 2016

- Developed a Machine Learning model for the City of Cincinnati to identify properties at risk of building code violations. 50GB+ of data
- Designed a predictive model for Infonavit (largest mortgage provider in Mexico) to predict home abandonment. 100GB+ of data
- Both pipelines (ETL, feature extracion, model training and model selection) developed using Amazon EC2, S3 and RDS.
- Communicated data analysis results to non-technical audience

### Fritime

Mexico City, MX

CTO and co-founder

Jan 2014 - May 2015

- Led a technical 3-person team
- Engineered the iOS app prototype for our seed investment round
- Programmed web services for our iOS app

### Independent Mobile App Developer

Mexico City, MX

Jun 2011 - Jan 2014

- Developed several 'civic apps' for iOS to provide easy access to legal regulations (e.g. traffic law) to prevent corruption

## Publications

**E. Blancas Reyes**, J. Helsby, K. Rasch, P. van der Boor, L. Haynes, R. Ghani, E. Cunningham. Early detection of properties at risk of blight using spatiotemporal data. Data for Policy 2016 at University of Cambridge.

K. Ackermann, **E. Blancas Reyes**, S. He, T. Anderson Keller, P. van der Boor, R. Khan, R. Ghani. Designing Policy Recommendations to Reduce Home Abandonment in Mexico. In Proceedings of the 22nd ACM SIGKDD International Conference on Knowledge Discovery and Data Mining, KDD'16.

## Skills

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**Programming languages:** Python, R, Objective-C, SQL. **Tools and technologies:** scikit-learn, NumPy, flask, Google Cloud (App Engine, Datastore, Storage and Compute Engine), PostgreSQL, PostGIS, Docker, MongoDB, AWS (EC2, S3, RDS and Beanstalk)

## Awards

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- 2017 – National Council of Science and Technology scholarship recipient
- 2016 – Fulbright-García Robles scholarship recipient
- 2011-2015 – *Academic talent* scholarship for undergraduate studies at Tecnológico de Monterrey
- 2015 – CENEVAL National Performance Excellence Award
- 2014 – Reto GobMX - Obtained a contract with the Federal Government of Mexico through an open competition
- 2014 – 1st Place in HackDF (Mexico City's Government)
- 2013 – Honorific Mention 3rd Prize to Innovation in Transparency (World Bank, INAI)
- 2011 – Honorific Mention in *App 115* Challenge (Mexico's Chamber of Deputies)
- 2011 – Physics and Mathematics Honors Program at Tecnológico de Monterrey

## Press

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- [Eduardo Blancas \(IMT'15\) sobresale en Data Science for Social Good](#). *Tecnológico de Monterrey*. September, 2015.
- [Infonavit Project: Reducing Home Abandonment](#). *DSSG blog*. August, 2015.
- [2015 Fellow Profiles: Eduardo Blancas Reyes & Eugenia Giraudy](#). *DSSG blog*. May, 2015.
- [¿No sabes cuándo circula tu auto? Revisa estas 'apps'](#). *CNN México*. August, 2014.
- [#HACKDF: Festival de datos en Ciudad de México](#). *La Nación*. February, 2014.
- [HackDF convoca a la ciudadanía a utilizar los datos que las secretarías del GDF generan y recaban con el objetivo de ideas y desarrollar aplicaciones que mejoren la vida en la ciudad](#). *LabCDMX*. February, 2014.
- [Una nueva versión de ciudadanía está disponible, ¿desea actualizar?](#). *TEDx ITESM CCM*. July, 2014.
- [Interview in ForoTV \(Spanish\)](#). *Televisa ForoTV*. February, 2014.
- [Premian app utilitaria](#). *Reforma Newspaper*. January, 2014.
- [Los piratas cívicos encuentran el botín de los datos mexicanos](#). *Yorokobu*. January, 2014.
- [Jurado elige a los ganadores de la 3ª edición del premio a la innovación en transparencia para la mejora de la gestión institucional](#). *World Bank*. August, 2013.
- [Le ahorran alumnos del Tec de Monterrey al Gobierno Federal 115 MDP](#). *Tecnológico de Monterrey*. June, 2013.
- [Premia Cámara baja nueva app... gratuita](#). *Reforma Newspaper*. April, 2013.
- [Bringing Down The Mexican Tech Mafia: How Hackers Stopped A \\$9.3 Million Fraud](#). *TechCrunch*. April, 2013.
- [115 millones por una aplicación o la necesidad de servicios web útiles en México](#). *Gizmodo en español*. March, 2013.

## Volunteering/Open Source

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[sklearn-evaluation](#). June 2016-Present

- Developed a Python package to evaluate Machine Learning models

[Stanford Scholar Initiative](#). May 2016

- Volunteered for two weeks to design the [Practical Machine Learning with Python](#) course
- Designed sections of the syllabus and provided code examples using scikit-learn and pandas