

# Curriculum Vitae

Uriel Martínez León

## Contact Information

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## Education

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### Ph.D. in Data Science

- **New York University (NYU)** — 2023-Present
- **Advisor:** Jonathan Niles-Weed
- **Research Focus:** Optimization, Geometry, Optimal Transport (Gradient Flows and Mean Field Games)

### M.Sc. in Mathematics

- **Universidad Nacional Autónoma de México (UNAM)** — 2021-2022
- **Advisor:** Pablo Suárez
- **GPA:** 9.4/10
- **Relevant coursework:**
  - Partial Differential Equations (Linear, Non-Linear Theory, Numerical Methods)
  - Functional and Harmonic Analysis
  - Differential Geometry, Geometric Analysis, Geometric Deep Learning

### B.Sc. in Applied Mathematics

- **Instituto Tecnológico Autónomo de México (ITAM)** — 2016-2020
- **Thesis:** "An Introduction to Domain Adaptation with Optimal Transport"
- **Advisors:** Andreas Wachtel and Jorge Rivera Noriega
- **GPA:** 8.6/10
- **Relevant coursework:**
  - Machine Learning and Computer Vision
  - Computational Mathematics (Linear and Non-linear Optimization, Numerical Analysis)
  - Mathematical Statistics (Inference, Multivariate Statistics, Econometrics, Time Series Analysis)
  - Mathematical Analysis (Real, Complex, Fourier)

## Research Experiences and Summer Schools

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### MIT Summer Geometry Initiative — Jul 2022—Aug 2022

- Selected as one of 34 SGI Fellows among a pool of undergraduate/graduate students worldwide.
- Attended tutorials on geometric processing and discrete differential geometry.
- Investigated three research projects on computational geometry.

## **MRSI Summer Graduate School on Geometric Flows — Jun 2022**

- Completed two weeks of courses on mean curvature and Ricci flows.
- Solved geometric analysis problem sets.

## **The Seventh Oaxaqueñian School of Mathematics — Jan 2022-Feb 2022**

- Researched questions regarding the Gromov-Wasserstein distance and applications.
- Gave a plenary talk on the uses of Optimal Transport for Domain Adaptation.

## **Teaching and Grading**

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- **New York University (NYU) — Current Position: Grader for Probability and Statistics**
- **Instituto Tecnológico Autónomo de México (ITAM) — 2018-2019: Teaching Assistant for Calculus**

## **Scholarships**

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- **Baillères Scholarship — ITAM — Aug 2016 - Dec 2020**
  - Full tuition scholarship granted to the highest score on the admissions exam in each one of the programs at ITAM. Highest recognition awarded to incoming undergraduate students.
- **Nuestro ITAM Scholarship — ITAM — Aug 2016 - Dec 2020**
  - Scholarship granted to students who obtain the highest grades in the admission exams and have financial needs.
- **National Scholarship — CONACyT — Feb 2021 — Dec 2022**

## **Work and Leadership**

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### **Mentor and Lecturer at AEM — ITAM — Sept 2019 - Dec 2020**

- Assisted students from unprivileged households in improving their high-school admission scores.

### **Calculus Teaching Assistant — ITAM — Aug 2018 - Jun 2019**

- Designed exams, problem sets, and weekly lectures.
- Held office hours to answer student questions.

### **Lecturer — ITAM's Adult High-school — Aug 2017- Jun 2018**

- Lectured on geometry and calculus for groups of older adults.

## **Coding Languages**

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- Matlab
- Python (TensorFlow, Scikit Learn)
- R (Base and Tidyverse)

## **Languages**

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- Spanish (native)
- English (fluent)
- French (intermediate)