

# Joel Castillo Espinosa

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Economist with experience in research and applied economics across topics such as inflation, expectations, climate change, and agriculture. Passionate about using data science and statistical programming to generate insights. Continuously working to refine and expand my skills.

## EXPERIENCE

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### Banco de México

Sept. 2022 – Present

#### *Economist*

- Research on climate change and economics, working with geospatial and climate data formats (NetCDF and GRIB) to analyze historical weather data and explore its economic impacts.
- Research assistance for working papers on diverse economic topics, including inflation, expectations, uncertainty, housing prices, and climate change.
- Team member in the Banxico's Survey of Expectations of Private Sector Economic Specialists

### Servicio de Administración Tributaria

Oct. 2021 – Aug. 2022

#### *Head of Department*

- Designed and actualized of services for the taxpayers. Developed a new method for the assign of Fiscal Obligations to the taxpayers.
- Assisted as specialist in regulation of Fiscal Obligations for the internal areas.
- Analyze and report of relevant economic variables that help to make the Central Bank's Monetary Policy.

### Revista Mexicana de Economía Agrícola y de los Recursos Naturales

July 2018 – May 2019

#### *Design Specialist*

- Designed and structured the content and publication of the Review. Organized and compiled the Working Papers for the Review.

## EDUCATION

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### El Colegio de México

Jul. 2019 – Jun 2021

#### *Master in Economics*

*Mexico City, Mexico*

**Thesis:** Efectos del TLCAN en el sector agrícola de México: Una aplicación del Método de Control Sintético.

### Universidad Autónoma Chapingo

Aug. 2013 – Jun 2018

#### *Bachelor in International Trade*

*Texcoco, Mexico*

**Thesis:** Análisis del mercado interno y Comercio Exterior de la carne porcina en México.

## SKILLS

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### Data Analysis

- Experienced in data analysis, with strong skills in cleaning, transforming, and managing complex datasets. Capable of visualizing data effectively to communicate findings clearly.

### Applied Economics

- Skilled in applied economics, with a strong background in using economic theories and quantitative methods to analyze real-world issues. Proficient in using statistical methods and tools to extract meaningful insights.

### Data Science / Machine Learning

- Applied Support Vector Machines (SVM) and K-Nearest Neighbors (KNN) for classification tasks, utilized regression models, decision trees/random forests, and ensemble techniques for prediction, optimizing model performance and accuracy. Applied text mining methods for processing and analyzing large textual datasets, extracting meaningful patterns and trends.

## LANGUAGES & SOFTWARE SKILLS

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**Language Skills:** Spanish (Native), English (Intermediate), French (Intermediate DELF B1)

**Software Skills:** R, Stata, Python, Eviews, SQL, Github, L<sup>A</sup>T<sub>E</sub>X