

# Asael Alonzo Matamoros

Forecasting/ Data Analyst/ Time-series/ Bayesian Statistics

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## EXPERIENCE

### Research contract

Finnish Center of Artificial Intelligence | October 2020.

Studied the uncertainty of Cross-Validation methods when comparing probabilistic machine learning models.

Skills: R, ML, Model Comparison, Data Visualization.

### Assistant Professor, Statistics Department

Universidad Nacional Autonoma de Honduras (UNAH) | October 2017 – October 2020.

Imparted Statistical Inference, Stochastic Processes, and Linear Models classes for the Department of Statistics.

Skills: Julia, STATA, Mathematics, Bayesian Statistics.

### Data analyst

Instituto Hondureño de Transporte Público | January 2017 – April 2018.

Designed statistical models for estimating the public transport demands using simulation and stochastic processes.

Skills: Simulation, Probability, Mathematical Modeling, Bayesian Statistics.

### Actuarial analyst

Instituto Hondureño de Seguridad Social | January 2016 – January 2017.

Wrote scripts for data cleaning and summaries for the actuarial evaluation of the total of affiliates in Honduras' primary pension system.

Skills: SQL, Data-cleaning, Big-data, Actuarial Modeling.

### Statistical Consultant

Instituto Hondureño de Turismo | January 2015 – January 2016.

Designed the Sampling procedure for estimating the Touristic Expenditure in Honduras.

Skills: SPSS, Excell, forecasting, time-series.

## RELEVANT PROJECTS

### Uncertainty in Bayesian Leave One Out Cross-Validation model comparison.

T. Sivula, M. Magnusson, A. Alonzo Matamoros, A. Vehtari, (2022).

I studied the uncertainty of Cross-Validation methods when comparing probabilistic machine learning models.

Skills: R, Data Visualization, Bayesian Statistics, ML.

### Multiple Degrees of Freedom Gaussian Process.

A. Alonzo Matamoros, (2021).

Generalized the concept of Gaussian processes for Deep learning, adapting them for data with multiple outliers and heavy-tailed distributions.

Skills: Deep Learning, Non-linear Modeling, Stan, Statistics.

### Bayesforecast: An R package for Bayesian Time series analysis.

A. Alonzo Matamoros, A. vehtari (2021).

I developed one of the first R packages for Bayesian time-series modeling and probabilistic forecasting.

Skills: C++, Developer, Stan, Time-series.

## SKILLS

### PROGRAMMING

• R • Python • Julia • Octave • Git  
• C++ • Java • SQL • Matlab

### STATISTICAL TOOLS

• SPSS • Stata • R • Excel • Stan • PyMC.  
• Tidyverse • Tableau • PowerBI.

### WORK

• Independent,  
• Time Management,  
• Decision Making,  
• Continuous Improvement,  
• Focus,  
• Proactive,  
• Friendliness.

### LANGUAGES

• Spanish (Native),  
• English (Professional).  
• Dutch (Beginner).

## EDUCATION

### M.Sc. Mathematics and Computation

Universidad de Cantabria | Santander, Spain.

October 2019 – October 2020.

### Certification in Probability

Society of Actuaries (SOA) | online, USA.

November 2016.

### B.Sc. Mathematics and Computer Science

UNAH | Francisco Morazan, Honduras

January 2010 – January 2015.

## REFERENCES

**Cristian Cruz**, Associate Professor, UNAH.

✉ cristian.cruz@unah.edu.hn

**Alicia Nieto-Reyes**, Associate Professor, Universidad de Cantabria.

✉ alicia.nieto@unican.es

**Fabrizio Ruggeri**, Research Director at the Italian National Research Council in Milano.

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