

# Francisco Hildemar Calixto de Alencar

DATA SCIENTIST JR.

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*I am currently a Statistical doctoral student at the University of Campinas working with multivariate finite mixtures. Member of the regression models research group of the UNICAMP Statistics department. I have an interest in statistical modeling and programming languages. Challenges are welcome, as I seek to perfect my abilities and knowledge.*

## Education

### Doctoral Student in Statistics

Campinas, SP, Brazil

UNIVERSITY OF CAMPINAS

2016 - Currently

- Research project: Finite mixture of linear mixed models for longitudinal data
- Scholarship: CAPES
- Advisor: Larissa Avila Matos
- Co-advisor: Victor Hugo Lachos Dávila
- Will be concluded in March, 2020

### Master in Statistics

Recife, PE, Brazil

FEDERAL UNIVERSITY OF PERNAMBUCO

2014 - 2016

- Research project: Bayesian influence diagnostic in a class of Beta Rectangular Regression
- Scholarship: CAPES
- Advisor: Raydonal Ospina Martínez
- Co-advisor: Juvêncio Santos Nobre

### Bachelor degree in Statistics

Fortaleza, CE, Brazil

FEDERAL UNIVERSITY OF CEARÁ

2010 - 2013

- Research project: Beta Rectangular Regression Models
- Advisor: Juvêncio Santos Nobre

## Experience

### TEACHING EXPERIENCE

#### Teaching Assistant

Campinas, SP, Brazil

UNIVERSITY OF CAMPINAS

S2/2018

- Course: ME414 - Estatística para Experimentalistas
- Advisor: Larissa Avila Matos
- PED B - Integral Teaching Activities

#### Teaching Assistant

Campinas, SP, Brazil

UNIVERSITY OF CAMPINAS

S1/2018

- Course: ME414 - Estatística para Experimentalistas
- Advisor: Diego Fernando de Bernardini
- PED C - Partial Teaching Support Activities

#### Institutional Program of Initiation to Teaching Scholarships (PIBID)

Fortaleza, CE, Brazil

FEDERAL UNIVERSITY OF CEARÁ

2012 - 2013

- Teaching Assistant: Probabilidade I; Probabilidade II; Estatística básica; Softwares em Estatística.
- Development of the booklet: Simulação Estocástica usando o software livre R.

*See here the booklet “Simulação Estocástica usando o software livre R”*

### OTHER EXPERIENCE

#### Gauss - Junior enterprise

Fortaleza, CE, Brazil

FEDERAL UNIVERSITY OF CEARÁ

2012-2012

- Responsible for managing the financial actions of company
- Statistical consulting services
- Development of the booklet: Introdução ao R.

*See here the booklet “Introdução ao R”*

# Skills

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## Analytical

STATISTICAL MODELING

## Programming

R (ADVANCED), PYTHON, JAGS, JUPYTER NOTEBOOK

## Operating systems

LINUX/UNIX (UBUNTU) AND WINDOWS

# Workshop and courses attended

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## Python Programming: A Concise Introduction

COURSERA/ WESLEYAN UNIVERSITY

Online

2019

## Data Visualization with R

UConn SPORTS ANALYTICS SYMPOSIUM (UCSAS) - UNIVERSITY OF CONNECTICUT

Storrs, CT, USA

2019

## Introdução ao aprendizado de máquinas usando R

XII ENCONTRO CIENTÍFICO DOS PÓS-GRADUANDOS DO IMECC

Campinas, SP, Brazil

2017

# Technical Report

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## Finite Mixture of Censored Linear Mixed Models for Irregularly Observed Longitudinal Data

ALENCAR, FRANCISCO H.C.; MATOS, LARISSA A.; LACHOS, VICTOR H.

- Technical Report, 19-23

University of Connecticut

2019

## Finite Mixture Modeling of Censored and Missing Data Using the Multivariate Skew-Normal Distribution

ALENCAR, FRANCISCO H.C.; GALARZA, CHRISTIAN E.; MATOS, LARISSA A.; LACHOS, VICTOR H.

- Technical Report, 19-31

University of Connecticut

2019

# Selected Software

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## R PACKAGE

### CensMFM

FINITE MIXTURE OF MULTIVARIATE CENSORED/MISSING DATA

- It fits finite mixture models for censored or/and missing data using several multivariate distributions. Point estimation and asymptotic inference (via empirical information matrix) are offered as well as censored data generation. Pairwise scatter and contour plots can be generated. Possible multivariate distributions are the well-known normal, Student-t and skew-normal distributions.
- Released to CRAN
- Author and maintainer

2019

# Presentations

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## ORAL PRESENTATION

### 33rd New England Statistics Symposium (NESS)

FINITE MIXTURE OF CENSORED LINEAR MIXED MODELS FOR LONGITUDINAL DATA

Hartford, CT, USA

May 15-17, 2019

## POSTER PRESENTATION

### **XXI Encontro de Iniciação à Docência**

SIMULAÇÃO ESTOCÁSTICA UTILIZANDO O SOFTWARE LIVRE R

Fortaleza, CE, Brazil

2012

## Events Attended

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### **UConn Sports Analytics Symposium (UCSAS)**

McHUGH HALL, UNIVERSITY OF CONNECTICUT

Storrs, CT, USA

2019

### **33rd New England Statistics Symposium (NESS)**

HILTON HARTFORD

Hartford, CT, USA

2019

### **XIII Encontro Científico dos Pós-Graduandos do IMECC**

INSTITUTO DE MATEMÁTICA, ESTATÍSTICA E COMPUTAÇÃO CIENTÍFICA (IMECC) - UNICAMP

Campinas, SP, Brazil

2018

### **XII Encontro Científico dos Pós-Graduandos do IMECC**

INSTITUTO DE MATEMÁTICA, ESTATÍSTICA E COMPUTAÇÃO CIENTÍFICA (IMECC) - UNICAMP

Campinas, SP, Brazil

2017

### **XXII Encontro de Iniciação à Docência**

FEDERAL UNIVERSITY OF CEARÁ

Fortaleza, CE, Brazil

2013

### **XXI Encontro de Iniciação à Docência**

FEDERAL UNIVERSITY OF CEARÁ

Fortaleza, CE, Brazil

2012