CONTACT INFORMATION

Florianópolis, SC

Brazil

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### SUMMARY

I have a great interest in the development of automation projects, including performance analysis of equipment and systems, process control, signal processing, data exploration and programming. In addition, I like to take part of projects involving elaborated algorithms, great programming skills, machine learning techniques, advanced mathematical and statistical knowledge and electronic systems.

## Specialties:

- Academic knowledge for modeling processes, process control and digital systems
- Machine learning techniques for regression and classification
- · Advanced statistical knowledge
- Solid programming knowledge:
  - different programming paradigms, like structured, object-oriented and functional programming
  - many different programming languages: C, C++, Java, Python, Clojure, Lisp, Haskell, Matlab, Assemble
  - experienced with complex algorithms and data structures implementation

### **EXPERIENCE**

## Neoway Business Solutions, Florianópolis, SC, Brazil

Research & Development, Programmer

**December 2011 to Present** 

- Machine learning techniques for:
  - image processing and classification
  - data mining

## Federal University of Santa Catarina, Florianópolis, SC, Brazil

R&D Project DAS-UFSC/CENPES-Petrobras

March 2010 to August 2012

- Condition based maintenance
- Signal processing
- Fault detection
- On-line monitoring system of well sensors

## Federal University of Espírito Santo, Vitória, ES, Brazil

Intern at Intelligent Control Laboratory

September 2008 to February 2010

- Oscillation detection in control loops
- Fault detection of control valves
- LabView

Institutional Programs of Scientific Initiation

July 2007 to October 2008

• Numeric simulation of petroleum reservoir using the LibMesh

Intern at PET Engenharia de Computação

March 2006 to August 2008

- Involved actively on research, education and voluntary work activities
- Organization of scientific and student events
- Participation in local and national conferences

#### **EDUCATION**

### Federal University of Santa Catarina, Florianópolis, SC, Brazil

M.S., Automation and System Engineering, 2010 – 2012

- Topics: signal processing, fault detection and isolation, empirical modeling based on historical data, sensor drift
- R&D scholarship
- 1 paper published at international workshop on automatic control of offshore oil and gas production

## Federal University of Espírito Santo, Vitória, ES, Brazil

B.S., Computer Engineering, 2005 – 2009

- PET scholarship
- Program of Scientific Initiation (PIVIC)
- Participation in 2 research projects
- 1 paper published and presented at international congress on computational methods in engineering
- 1 paper published at international conference on industry applications

### EXTRA COURSES Coursera

Machine Learning (Stanford University), April 2012 – July 2012 (overdue)

#### **PUBLICATIONS**

- [1] Boechat, Andre A.; Moreno, Ubirajara F.; Haramura, Decio, Jr., "On-Line Calibration Monitoring System Based on Data-Driven Model for Oil Well Sensors," in Proceedings of the IFAC Workshop on Automatic Control in Offshore Oil and Gas Production, Trondheim, Norway, 2012, pp. 269–274.
- [2] BOECHAT, A. A., MORENO, U. F. and TEIXEIRA, A. F. . PROPOSTA DE UMA ARQUITETURA DE MONITORAMENTO BASEADO NA CONDIÇÃO PARA APLICAÇÃO EM UNIDADES MARÍTIMAS DE PRODUÇÃO. VI Congresso Rio Automação, 2011, Rio de Janeiro. VI Congresso Rio Automação, 2011.
- [3] MUNARO, C. J. and BOECHAT, A. A. . Ambiente computacional baseado em Labview para detecção de oscilações em malhas de controle. IX Induscon 2010 9th IEEE/IAS International Conference on Industry Applications, 2010, São Paulo.
- [4] BOECHAT, A. A. and VALLI, A. M. P. . Funcionalidades da biblioteca LibMesh na resolução de escoamento de fluidos pelo método dos elementos finitos. Congresso Ibero-Latino-Americano de Métodos Computacionais em Engenharia, 2009, Armação de Búzios. CILAMCE 2009 - Congresso Ibero-Latino-Americano de Métodos Computacionais em Engenharia, 2009.

### SKILLS

Computer Programming Languages:

• C, C++, Clojure, Java, Lisp, Matlab, Octave, Haskell

Machine Learning and Statistics:

• regression, classification, statistical detection, data exploration

Instrumentation, Control, Data Acquisition, Test, and Measurement:

• Simulink, LabVIEW

Circuit Description:

VHDL

Version Control:

• Git, SVN

**Productivity Applications:** 

• TEX (LATEX, BIBLEX), Vim

Operating Systems:

• Linux

### **AWARDS**

Postgraduate program in Automation and Systems Engineering

R&D Scholarship

# Federal University of Espírito Santo

• Scholarship

## LANGUAGES

Portuguese
• Native

English

Reading: very goodWriting: good Speaking: poor

Additional INFORMATION GitHub: github.com/boechat107