Antonio **Rueda-Toicen**

SOFTWARE ENGINEER · (DATA) SCIENTIST

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"A system of cells interlinked within one stem… "

Experience

Thinkful
New York City, USA

INSTRUCTOR FOR THE DATA SCIENCE BOOTCAMP
May 2018 - current

- Individual mentoring on statistics, databases, experimental design, A/B testing, data visualization, and machine learning
- Interviewing of candidates and capstone project grading
- 85% of students are hired as data scientists within 6 months of completing the program
- Tools taught: Python, SQL, Jupyter, pandas, numpy, matplotlib, seaborn, TensorFlow, deep learning

The Chain
Caracas, Venezuela

CHIEF TECHNOLOGY OFFICER | LEAD ENGINEER
December 2017 - current

- Led the development of four software projects on blockchain and artificial intelligence: Coinet, Airmed, Surgflow, Plastico
- Management of fifteen software engineers
- Requirements engineering, full stack software development, QA, and tech stack: NodeJS, React, Hyperledger, Stellar, Ethereum, IPFS
- http://thechain.tech/

Datacamp
New York City, USA

COURSE DEVELOPER AND MAIN INSTRUCTOR: IMAGE SEGMENTATION WITH PYTHON
October 2018 - current

- Authoring of content (video lectures, course content and coding assignments) for the Image Segmentation with Python course for Datacamp (1M userbase), to be published in April 2019.

National Institute of Bioengineering, Central University of Venezuela
Caracas, Venezuela

INSTRUCTOR AND RESEARCHER
April 2017 - October 2018

- Instructor at the Center of Medical Visualization, courses taught: "Applications of fractal geometry to biomedicine" and "Software development for scientists and engineers"
- Research in biomedical computer vision focused in the segmentation and characterization of brain tumors in MRI, see Google Scholar link for related publications.
- Research on cellular automata, complex networks, information theory, and fractal geometry
- Supervision of biology and computer science thesis projects.

Udacity
Mountain View, California

MENTOR AND PROJECT REVIEWER: DATA ANALYSIS NANODEGREE
Dec 2017 - May 2018

- Mentoring and project review for the Data Analyst Nanodegree at Udacity
- One on one coaching directed to students learning statistics, Python, R, SQL and Tableau

Yttrium Technology LLC
Sunrise, Florida

LEAD SOFTWARE ENGINEER
October 2013 - May 2014

- Development of DICOM PACS solution for the storage and transmission of clinical medical image data
- Tools used: C#, Java, XNAT Server, DICOM

Languages

Human-to-computer   Python, R, SQL, C, C++, Matlab, CUDA, Javascript, HTML & CSS

Education

Central University of Venezuela
MASTER'S DEGREE IN BIOENGINEERING

Caracas, Venezuela

Jan. 2014 - April 2017

- Biomedical computer vision programme.
- Thesis: Classification of brain tumors in multimodal MRI with network automata
- Advisor: Miguel Martín-Landrove

Central University of Venezuela
LICENTIATE DEGREE IN COMPUTER SCIENCE

Caracas, Venezuela

Mar. 2007 - Oct. 2013

- Specialization in Computer Graphics.
- Thesis: Segmentation of brain tumors in multichannel MRI with GPU-parallelized cellular automata
- Advisors: Miguel Martín-Landrove and Rhadamés Carmona

Selected Publications

Tumor Growth in the Brain: Complexity and Fractality

Springer Series in Computational Neuroscience

BOOK CHAPTER IN "THE FRACTAL GEOMETRY OF THE BRAIN": MIGUEL MARTÍN-LANDROVE, ANTONIO BRÚ, ANTONIO RUEDA-TOICEN, & FRANCISCO TORRES-HOYOS

2016

available online

Evolution Rules of Deterministic Cellular Automata for Multichannel Segmentation of Brain Tumors in MRI

Proceedings of CIMENICS XII

CONFERENCE ARTICLE: ANTONIO RUEDA-TOICEN, RHADAMÉS CARMONA, MIGUEL MARTÍN-LANDROVE, & WUILIAN TORRES

2014

available online, with code repository on GitHub

Search of Complex Binary Cellular Automata with Behavioral Metrics

Complex Systems, Vol 24, No. 1

JOURNAL ARTICLE: JUAN C. LÓPEZ-GONZÁLEZ & ANTONIO RUEDA-TOICEN

2015

available online, app available at: cellular-automata.com/discoverer