Cristian Sandoval-Pineda

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Software Engineer, Machine Learning, Data Science

Qualifications and research interests

Systems and Computer Engineer who enjoys doing data analysis and data visualization using R, javascript, python and even C/C++, also web scraping using R, python and bash/shell. Industry experience in data science, machine learning, development and implementation of computational tools for data analysis, data governance and psychometrics. I am interested in the application of machine learning/deep learning and parallel computing tools and techniques in the context of information retrieval.

Technical Skills

- **C++:** Simulation, parallel computing, optimization techniques. *8 years*
- **R/R Studio:** Data analysis, machine learning, data mining, web scraping. *6 years*
- **Bash:** Tasks automation, web scraping. *6 years*
- **Python:** Tasks automation, web scraping. *5 years*
- **Java:** Web development. *4 years*
- **C#:** Web/mobile development. *3 years*
- **HTML/CSS/JS:** front end development, data visualization. *6 years*
- **Firebase:** Data integration, web apps. *3 years*
- **AWS:** Cloud computing architectures and high performance computing environments. *1 years*
- **BD:** MySQL, MongoDB. *4 years*
- **OS:** Windows (6 years), Linux (9 years), OS X (4 years). *9 years*

Education

Universidad Nacional de Colombia *2017*
Systems and Computer Engineering **Program**

Universidad Nacional de Colombia *2016*
Computational Neuroscience "Understanding and Modeling the Brain" **Seminar**

Universidad Nacional de Colombia *2016*
Urban logistics: agents, objectives and supporting methods for decisions of public/private agents **Seminar**

Universidad Nacional de Colombia *2015*
Software evolution and maintenance **Seminar**

Experience

Frosthale Group

Lead, specialized software development *December 2019 - Current*

- Leading development, testing and deployment of software applications using REST APIs and Websockets of NYSE stockbrokers for the optimal organization of market data.
- Implementation of an autonomous application that replaced the purchase orders platform for complex financial instruments to facilitate and optimize the transactional operation of the Corporate Holding.
- Reverse engineering and data analysis in order to transform data for storage, high availability and consume.

Data Knowledge Consultants

Lead, Data Governance Analyst, Technology Team *July 2019 - December 2019*

- Lead of the Data Governance Technology team at Datacrédito Experian
- Development and implementation of workflows for the initiative, focused on automation.

- Development and implementation of automation solutions for reports.
- Automate policies, standards, and processes
- Design for data quality and model for information relevance

Mundopato

Full Stack developer   *April 2018 - December 2018*

- Development, testing and maintenance of Web applications.. Tests and analysis to ensure desired functionality.
- Setup and deployment for applications written in R for test scoring, result analysis and classification.

Workapps SAS

Web and Mobile developer using Xamarin(iOS, Android)   *July 2016 - July 2017*

- Development, testing and maintenance of Web, iOS and Android applications. Tests and analysis to ensure desire functionality and optimization.
- Setup of deployment for applications in multiple platforms (iOS, Android and Web), and ensure compatibility between versions.

Universidad Nacional de Colombia

SICS research group. Developer and Researcher   *November 2014 - March 2016*

- Analysis, design, implementation and maintenance of numerical application exposed as R packages.
- Workflow management based on git, to coordinate code repositories in which statisticians and developers contribute. Integration of different modules in the package, using interfaces between R and C ++.
- Configuration and deployment of the package for multiple operating systems (Linux, OSX and Windows). Code testing and continuous integration into the workflow.

Personal projects

sp-feedforward-neuralnetworks   *June 2016 - September 2017*
A feedforward neural network visualizer and tester using Vue.js, d3, mathjs and firebase.

SPANN / RSPANN   *2015 - 2018*
C++ artificial neural network library and R package using Rcpp. The library has some models of artificial neural networks and functionalities to experiment.

SPGO / RSPGO   *2014 - 2018*
C++ optimization library and R package. The library has structures and algorithms of many optimization methods.

RNeuroEvolution   *2017 - 2018*
R package that contains some neuroevolution strategies and data visualization tools.

RTimeSeriesPE   *2015 - 2016*
R package for parameter estimation in the ARMA - ARIMA models using evolutionary computing techniques.

Viviendo-Nuestro-Rock   *December 2017*
Web app developed for the hackathon "BibloRock: una historia 3.0 de Rock al parque" (December 13 and 14 2017).

References

References will be provided upon request.