Sebastian Ernesto Sierra Loaiza

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EDUCATION

Student of MSc. in Systems and Computing Engineering — Feb 2015 - Present
Universidad Nacional de Colombia, Bogotá Campus
Grade Average: 4.4 (Max grade is 5).
Thesis proposal: *Text classification using learned distributed representations with neural networks*
Advisor: *Fabio A. González O., PhD.*

Systems and Computing Engineer — Aug 2008 - Nov 2014
Universidad Nacional de Colombia, Bogotá Campus
Concentration: Computer Science
Grade Average: 3.9 (Max grade is 5).

RESEARCH INTERESTS

- Natural Language Processing
- Representation Learning
- Authorship analysis
- Deep Learning

EXPERIENCE - RESEARCH

Laboratorio de Tecnologías del Lenguaje - Visiting scholar — Feb 2017 - Mar 2017
INAOE, Cholula, Mexico
Developing author profiling strategies based on convolutional neural networks for the project *Caracterización de usuarios en redes sociales: hacia un enfoque multimodal y multidominio.*

MindLab Research Group - Research Developer — Apr 2016 - Present
Universidad Nacional de Colombia, Bogotá
Working as a research developer under Colciencias project *Desarrollo de un sistema informático para la búsqueda sistemática de fuentes naturales para la elaboración de bioproductos.* During this project I have supported requirements elicitation process and testing process for the *Bioprospectus* software. Designed and developed algorithms for text analysis, text mining and information retrieval on Java and Python using Backbone, Elastic Search, Redis, Mongodb and MySQL.

MindLab Research Group - Research Developer — May 2014 - Mar 2016
Universidad Nacional de Colombia, Bogotá
Worked as a research developer under Colciencias project *Diseño e implementación de un sistema de cómputo sobre recursos heterogéneos para la identificación de estructuras atmosféricas en predicción climatológica.* Designed and implemented Machine Learning models on Matlab and Python for classification of atmospheric phenomena. Also developed parallelized strategies for detection and categorization of atmospheric phenomena using Apache SPARK.

EXPERIENCE - OTHER

Facultad de Ciencias Agrarias - Developer — May 2013 - Oct 2013
Universidad Nacional de Colombia, Bogotá
Responsible for the overall performance of the web page of the *Facultad de Ciencias*

Agrarias. Another duties included performing several changes in order to meet functional requirements and publishing graphical and multimedia pieces on the web page. Developed mainly on HTML and Javascript.

Instituto de Biotecnología - Developer Oct 2012 - Jan 2013
Universidad Nacional de Colombia, Bogotá
Under the Center of Bioinformatics of the Institute maintained up-to-date several collections of species using MySQL as RDBMS. These collections had to be visualized from the main page of the Center of Bioinformatics by several researchers.

PUBLICATIONS

Prasha Shrestha, Sebastian Sierra, Fabio A. González, Paolo Rosso, Manuel Montes-y-Gómez, Thamar Solorio. Convolutional Neural Networks for Authorship Attribution of Short Texts. In: Proc. of the 15th Conference of the European Chapter of the Association for Computational Linguistics, EACL 2017, Valencia, Spain, April 3-7, pp. (accepted)

Sebastian Sierra, Juan F Molina, Angel Cruz-Roa, José Daniel Pabón, Raúl Ramos-Pollán, Fabio A. González, Hugo Franco. Classification of Low-Level Atmospheric Structures Based on a Pyramid Representation and a Machine Learning Method. In: Progress in Pattern Recognition, Image Analysis, Computer Vision, and Applications, the 20th Iberoamerican Conference on Pattern Recognition (CIARP 2015), pp. 19-26.

MAJOR SCHOOL PROJECTS

EscalArte: An app developed during the Mobile Apps development course intended to integrate athletes, climbing gyms and everybody related somehow to the activity of climbing.

TECHNICAL SKILLS

Languages & Software: Proficient programming skills in Matlab, Python, Java, Javascript, Bash and HTML.
Big data frameworks: Apache SPARK.
Operating Systems: Windows(User) and Unix based (User and administrator).
DBMS: MySQL, MongoDB and Redis.
Machine learning frameworks: Keras, Blocks, Scikit-learn, Caffe and Theano.

AWARDS AND LEADERSHIP

Volunteer teacher for the *Pre-Icfes Popular de Kennedy* project, here I taught math to young public school students who wanted to go to college - 2012.
T.A. for the Software Engineering I Course at National University - 2011-I

GRADUATE COURSES

- Machine Learning
- Natural Language Processing and Text Mining
- Mobile Apps development
- Artificial Life
- Advanced Topics on Algorithms
- Advanced Topics on Software Engineering
- Geomatics
- Information Retrieval