Nelson Abdiel Colón Vargas (Nel Abdiel) Data Scientist

211 River Landing Dr., Apt. 401
Daniel Island, South Carolina
29492, USA

+1 (787) 550-8328
nel.abdiel@gmail.com
http://www.nelabdiel.com

EDUCATION

University of Iowa, Iowa City, Iowa
Ph.D. in Mathematics — May 2016
M.S. in Mathematics — Dec 2014

University of Northern Iowa, Cedar Falls, Iowa
M.A. in Mathematics — Jul 2010

University of Puerto Rico, Rio Piedras Campus, San Juan, Puerto Rico
B.S. in Mathematics — May 2009

CERTIFICATE

The Data Incubator, Washington, D.C.
Certificate in Data Science — Feb 2016
Fellow. *Selected among the less than* 4% *of +1900 applicants.*

SKILLS

- **Stack**: Python, D3.js, Hadoop, Cassandra, HAWQ, Greenplum, Ambari.
- **Knowledge of**: Machine Learning, Natural Language Processing, Data Visualization, Web Scraping.
- **Tools**: Git, Pandas, NumPy/SciPy, Scikit-Learn, NLTK, Flask/Django, Bokeh, HTML5/CSS3, Carto.
- **Familiar with**: SQLite, CockroachDB, MongoDB, MapReduce, Spark/Scala, R, Go, JavaScript, C++.
- **Dominance of**: English and Spanish.

EXPERIENCE

Soteria - Security Consulting & Data Analytics, Charleston, S.C.
Data Scientist - Python Developer (Short Term Contract) — Jun 2016–Present

- Created Python software for extraction and classification of features from unstructured data from $+30000$ websites a day. Both structured and unstructured data is then automatically saved into a Cassandra database.
- Devised Python pipeline to automate the scoring of $+30000$ websites received per day.
- Developed predictive model using a Gradient Boosting Classifier to automate the detection of cyber threats with a 96% accuracy.
- Assembled predictive model for detection of malicious websites based on content by performing Natural Language Processing with the use of Count Vectorizer and Logistic Regression with a 95% accuracy.
- Built multiple web applications for internal use using Python, Flask, Django, HTML5/CSS3, Bootstrap and D3.js, that allows analysts to interact with data from OSSEC and other services in a more visual matter.
- Contributed to the improvement of already existing solution by boosting predictive model performance and adding new features to web application.
- Was involved in the decision making of the technologies to be implemented for ETL.

The Data Incubator, Washington, D.C.
Fellow — Jan 2016–Feb 2016
Selected Projects:

- **Capstone**: http://iokilos.herokuapp.com. Scraped over a thousand pages from various websites to collect data. Conducted a thorough analysis of the distribution of world records in Weightlifting. Developed an app for strength athletes' training cycles using Clustering Algorithms.
- Conducted open-ended analysis of user behaviors on +9GB of StackOverFlow data using Scala and Spark.

Mathematics Department, University of Iowa.
Instructor and Teaching Assistant — Aug 2011 – Dec 2015
• Taught a variety of college courses (25 to +100 students), from Precalculus to graduate courses in Topology.

SELECTED PUBLICATIONS & AWARDS

The Localized Skein Algebra Is Frobenius — Jan 2016
N. Abdiel and C. Frohman, in *Journal of Knot Theory And Its Ramifications*

Ballard-Seashore Fellowship, University of Iowa — Jan 2016 – May 2016
Awarded for outstanding contributions to the field of Topological Quantum Field Theory.