Nelson Abdiel Colón Vargas, Ph.D. (Nel Abdiel)

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EDUCATION

The Data Incubator, Washington, D.C.

2016 Certificate in Data Science

• Selected among the less than 4% of +1900 applicants.

University of Iowa, Iowa City, Iowa

Ph.D. in Mathematics 2016 M.Sc. in Mathematics 2014

University of Northern Iowa, Cedar Falls, Iowa

M.A. in Mathematics 2010

University of Puerto Rico, Rio Piedras Campus, San Juan, Puerto Rico

B.Sc. in Mathematics 2009

EXPERIENCE

Soteria - Security Consulting & Data Analytics, Charleston, S.C.

Jun 2016-Present Data Scientist

- · Built algorithms to assess risk of Phishing on emails and websites based Natural Language Processing with the used of Python Packages such as Scikit-Learn, NLTK and Pandas.
- Concocted metrics and analytics to detect and classify different phishing techniques such as Typosquatting, Spoofing, Whaling and Spear Phishing among others.
- Developed predictive model to automate the detection of malicious websites with a 97% accuracy.
- Ameliorated solutions by redesigning ETL and data analysis to function as a Linux service.
- Engineered and maintained analytics API with the used of Python, Pandas, SciKit-Learn and Flask.
- Built dashboards for internal use using Python, Flask, Django, HTML5/CSS3, Bootstrap, Bokeh and D3.js for analysts to interact with data from OSSEC and other services in a more visual matter.
- Created software for feature extraction from unstructured data from +30000 websites a day.
- Devised Python pipeline to automate the classification of +30000 websites received per day.
- Was involved in the decision making and engineering of technologies and infrastructure for ETL.
- Contributed to the writing of the technical section of an NSF SBIR/STTR grant proposal.
- Prepared LaTeX templates for client's automated monthly reports.
- Developed probabilistic model to predict the outcome of ping pong matches in the office.

K2 Data Science, Remote

Data Science Curriculum Advisor - Contract

Dec 2016-Apr 2017

- Designed and developed assignments with detailed solutions for the the following subjects: Data Cleaning and Preprocessing, Exploratory Data Analysis, Regression, Classification, Clustering, Natural Language Processing, Recommendation Systems and Neural Networks.
- Helped plan and develop comprehensive learning material to aid students with assignments and prepare them for their future roles as Data Scientists.

PUBLICATIONS The Localized Skein Algebra is Frobenius

May 2017

N. Abdiel and C. Frohman, Algebraic and Geometric Topology, Accepted (in production queue).

Frobenius Algebras Derived From The Kauffman Bracket Skein Algebra

Jan 2016

N. Abdiel and C. Frohman, Journal of Knot Theory And Its Ramifications, , Volume 25, Issue 04, April 2016.

SKILLS

- Stack: Python, PostgreSQL, Spark, Hadoop, Bash, D3.js, Jupyter, Zeppelin, Ambari, Git, LATEX, Go.
- Knowledge of: Machine Learning, Data Visualization, Object-Oriented Programming, Neural Nets.
- Tools: Pandas, NumPy/SciPy, Scikit-Learn/XGBoost, Keras, Theano, Bokeh, Flask, HTML5/CSS3.
- Familiar with: MapReduce, Cassandra, HAWQ, SQLite3, CockroachDB, MongoDB, R, C++, OSSEC.
- Dominance of: English and Spanish.