

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

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EDUCATION	<p><b>The Data Incubator</b>, Washington, D.C. Certificate in Data Science 2016 • <i>Selected among the less than 4% of +1900 applicants.</i></p> <p><b>University of Iowa</b>, Iowa City, Iowa Ph.D. in Mathematics 2016 M.Sc. in Mathematics 2014</p> <p><b>University of Northern Iowa</b>, Cedar Falls, Iowa M.A. in Mathematics 2010</p> <p><b>University of Puerto Rico, Rio Piedras Campus</b>, San Juan, Puerto Rico B.Sc. in Mathematics 2009</p>
EXPERIENCE	<p><b>Soteria - Security Consulting &amp; Data Analytics</b>, Charleston, S.C. Data Scientist Jun 2016–Present</p> <ul style="list-style-type: none"><li>• 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.</li><li>• Concocted metrics and analytics to detect and classify different phishing techniques such as Typosquatting, Spoofing, Whaling and Spear Phishing among others.</li><li>• Developed predictive model to automate the detection of malicious websites with a 97% accuracy.</li><li>• Ameliorated solutions by redesigning ETL and data analysis to function as a Linux service.</li><li>• Engineered and maintained analytics API with the used of Python, Pandas, SciKit-Learn and Flask.</li><li>• 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.</li><li>• Created software for feature extraction from unstructured data from +30000 websites a day.</li><li>• Devised Python pipeline to automate the classification of +30000 websites received per day.</li><li>• Was involved in the decision making and engineering of technologies and infrastructure for ETL.</li><li>• Contributed to the writing of the technical section of an NSF SBIR/STTR grant proposal.</li><li>• Developed probabilistic model to predict the outcome of ping pong matches in the office.</li></ul> <p><b>K2 Data Science</b>, Remote Data Science Curriculum Advisor - Contract Dec 2016–Apr 2017</p> <ul style="list-style-type: none"><li>• 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.</li><li>• Helped plan and develop comprehensive learning material to aid students with assignments and prepare them for their future roles as Data Scientists.</li></ul>
PUBLICATIONS	<p><b>The Localized Skein Algebra is Frobenius</b> May 2017 N. Abdiel and C. Frohman, in <i>Algebraic and Geometric Topology</i></p> <p><b>Frobenius Algebras Derived From The Kauffman Bracket Skein Algebra</b> Jan 2016 N. Abdiel and C. Frohman, in <i>Journal of Knot Theory And Its Ramifications</i></p>
SKILLS	<ul style="list-style-type: none"><li>• <i>Stack</i>: Python, PostgreSQL, Spark, Hadoop, Bash, D3.js, Jupyter, Zeppelin, Ambari, Git, <math>\LaTeX</math>.</li><li>• <i>Knowledge of</i>: Machine Learning, Data Visualization, Object-Oriented Programming, Neural Nets.</li><li>• <i>Tools</i>: Pandas, NumPy/SciPy, Scikit-Learn/XGBoost, Keras, Theano, Bokeh, Flask, HTML5/CSS3.</li><li>• <i>Familiar with</i>: MapReduce, Cassandra, HAWQ, SQLite3, CockroachDB, MongoDB, R, C++, OSSEC.</li><li>• <i>Dominance of</i>: English and Spanish.</li></ul>