Nelson Abdiel Colón Vargas (Nel Abdiel)   Data Scientist

8510 16th Street, Apt. 308,
Silver Spring, Maryland
20910, USA

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

EDUCATION

University of Iowa, Iowa City, Iowa
Ph.D of Pure Mathematics (In Progress)   May 2016
Master of Science in Mathematics   Dec 2014

University of Northern Iowa, Cedar Falls, Iowa
Master of Arts in Mathematics   Jul 2010

University of Puerto Rico, Rio Piedras Campus, San Juan, Puerto Rico
Bachelor in Mathematics   May 2009

SKILLS

- **Expertise**: Statistical Analysis, Data Visualization.
- **Proficient with**: Python, SQL, HTML5/CSS3, Bootstrap3, LaTeX.
- **Experience with**: Machine Learning, Natural Language Processing, Web Scraping, JSON.
- **Tools**: Pandas, NumPy/SciPy, D3, Scikit-Learn, NLTK, Bokeh, Flask, Heroku, Github.
- **APIs**: Twitter, Spotify, BandsInTown, Stubhub, Eventbrite, Quandl.
- **Familiar with**: R, Spark, Scala, Hadoop, MapReduce, C++, JavaScript.
- **Dominance of**: English and Spanish.

EXPERIENCE

The Data Incubator, Washington, D.C.
Fellow. *Selected among the less than 4% of +1900 applicants.*   Jan 2016–Feb 2016
Certificate in Data Science
Capstone Project: http://iokilos.herokuapp.com

- Analyzed the distribution of world records in Olympic Weightlifting using the Naive Bayes Classifier from Scikit-Learn. Also developed an app for strength athletes' training cycles using Clustering Algorithms. The data was scraped from over a thousand pages from various websites.

Selected Projects:

- **Big data related**: Conducted open-ended analysis of user behaviors on +9GB of StackOverFlow XML data using Scala and Spark. Analyzed +10GB of XML data from Simple English and Thai Wikipedia with MapReduce.

- Web scraping and social graph analysis of more than 100,000 photo captions from NYC Social website using Python (BeautifulSoup, Pandas and Networkx).

- Developed pipelines with Python (Scikit-Learn) for predicting star reviews for businesses based on Yelp's academic dataset. Performed Natural Language Processing analysis on Yelp's academic dataset, +325MB of json data, with Python (NLTK and Scikit-Learn).

- Analyzed New York food inspection reports for the last 4 years, approximately 530,000 records, using advanced SQL and Python (Pandas).

Topology Research, University of Iowa
Graduate Research Student   Aug 2012 – Dec 2015
Professor Charles Frohman
- Optimized Skein computation algorithms, reducing them from exponential to linear time.

University of Puerto Rico, University of Northern Iowa, Florida State University, University of Iowa.
Instructor and/or Teaching Assistant   Jun 2004 – Dec 2015
- Taught and/or TAed for a wide range of college courses, from Precalculus to graduate courses in Topology. Been in charge of classes with more than a hundred students.

SELECTED PUBLICATIONS & AWARDS

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

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