

nicolasfishman

data scientist

contact

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languages

bilingual
spanish/english

programming

C++, Java
Python
Matlab, Wolfram, R
Javascript, PHP
CSS3 & HTML5
MySQL, MongoDB

interests

machine learning, bioinformatics, cryptography

education

- since 2017 **Classes in Computer Science** George Washington University, Washington, DC
Cryptography with Prof. Valerie Nelson
Bioinformatics with Prof. Keith Cranston
Machine Learning with Prof. Claire Monteleoni, Grade Earned: A
- 2015 - 2016 **Classes in Mathematics** Stanford University, Stanford, CA
Multivar. Integral Calc. with Prof. Margarita Kanarsky, Grade Earned: A
Multivar. Differential Calc. with Prof. Margarita Kanarsky, Grade Earned: A
- since 2013 **High School Diploma** Woodrow Wilson High School, Washington, DC
GPA: 4.5
Science, Mathematics and Technology Scholar of Excellence,
Information Technology Student

experience

- since 2016 **Research Fellowship** Comparative Genomics Section, National Institutes of Health
Prostate cancer tumor classification from variant statistics. Determining if tumors are BRCA1, BRCA2, or FASTA, among other types, based on frequency and ratios of both single nucleotide and structural variations.
- since 2016 **Founder** Science Olympiad Team, Woodrow Wilson High School
Connected available funding and available expertise to expand opportunity.
- since 2016 **President** National Honor Society, Woodrow Wilson High School
Providing tutoring and organizing community service projects.
- 2016 **IRTA Intern** Comparative Genomics Branch, NHGRI/ NIH
Storage and analysis of structural variants. See DOGSV
- since 2015 **President** FIRST Robotics Team 2914, Woodrow Wilson High School
Managing a budget of \$20,000, applying for 6 grants, totaling over \$10,000 dollars to pay for team equipment and travel.
- 2015 - 2016 **Tutor** Georgetown University, George Washington University
Advanced Mathematics and Computer Science, achieved a 100% pass rate for all students.
- 2014 - 2015 **Localization Developer** Open Medical Record System
Facilitating ease of translation across a large codebase.
- since 2014 **Lead Programmer** FIRST Robotics Team 2914, Woodrow Wilson High School
Overseeing robot code development, creation of Python based vision system in 2014, development of working Kalman filter for robot location tracking in 2015 and 2016. Prediction using neural networks of FRC games in 2016 and 2017.
- since 2014 **Web Developer** The Wilson Beacon, Woodrow Wilson High School
Website redesign and performance improvements. thewilsonbeacon.com

applications

2016	DOGSV	Comparative Genomics Branch, National Institutes of Health
	Database for the storage and analysis of structural variants. Clustering and classifier for assessing the likelihood of a given set of variants being real (not a false positive).	
2016	Legal Aid Dashboard	Drupal Legal Aid
	Using Google web traffic data for various legal aid websites, classify the topics of the most popular web pages by location to facilitate allocation of resources to meet need.	
2016	Baseball Predict	Machine Learning Final, George Washington University
	Prediction of baseball game outcomes based on historical player statistics.	

honors

2017	Science Fair First Place Winner	Woodrow Wilson High School
	Top prize in school wide science fair for machine learning applications.	
2016	Science, Mathematics, and Technology Scholar	Woodrow Wilson High School
	For the completion of the requisite courses and the completion of a final project.	
2016	National Hispanic Recognition Program	The College Board
	Awarded to the top performing hispanic high school students.	
2016	National AP Scholar	The College Board
	For earning an average score of at least 4 on all AP Exams taken, and scores of 4 or higher on eight or more of these exams.	
2016	Judges' Award	FIRST Robotics
	For mentorship and tutoring programs developed in 2016.	
2014	Innovation and Control Award	FIRST Robotics
	For a vision processing system written in Python.	
2013	Honor Roll	Woodrow Wilson High School
	For receiving a GPA over 3.0. Earned every semester since Freshman year.	

service

since 2015	National Honor Society	Woodrow Wilson High School
	Mathematics, history, English, computer science and physics tutoring.	
since 2014	Invasive Species Management	Rock Creek Conservancy
	Certified volunteer leader for the Rock Creek Conservancy and National Park Service.	
2013	IT Instructor	Dominican Republic
	Designing and teaching a curriculum focussed on teaching foundational IT skills: how to use email, Microsoft Word, Google for communications and research. Taught in Spanish.	

publications

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working papers

DOGSV: A Relational Database for the Storage and Analysis of Structural Variants

Nicolas Fishman, Brian Davis

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research reports

Proving Prediction Equivalence in Historical Team and Player Statistics

Nicolas Fishman, Rui Tang, Rui Lui

Machine Learning 6343 Final Paper, 2016