

EVAN MISSHULA

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SUMMARY

Quantitative professional with 15+ years experience applying advanced mathematics to complex problems for business, government and non-profit. Math BA from Yale, Masters level coursework in Mathematics and Finance from Columbia. Early career in Finance starting at Goldman Sachs, followed by pivot into Criminal Justice (CUNY PhD/ABD). Recognized leader in the adoption and advancement of Free Software at across all City University Senior Colleges and the Free Software Community. Frequent Speaker on topics ranging from Free Software in the Classroom, Functional Programming, Reproducible Research and Interactive Data Visualization. Personally brought renowned speakers to CUNY including Dr. Richard Stallman (FSF), Kaitlin Thaney (Mozilla) and Dr. Gerald Sussman (MIT).

EXPERIENCE

Senior Data Analyst, *New York Criminal Justice Agency (NYCJA)* *March 2018 - Present*

The NYCJA is principal data repository and research agency for court data in NYC.

- Recruited by the Director of Research to transform NYCJA via Free Software and Machine Learning and to better compete with University of Chicago CrimeLab research department for NYC budget. Early accomplishments include:
- Demonstrated the economic impact of NYCJA's Desk Appearance Notification program with using an 90 day Randomized Control Trial that covered 1.2 million court appearances using R.
- Created parsimonious highly predictive models of failure to appear with AUC = 99.4% using Lasso Regression using R and the Caret, glmnet, doParallel and pROC R libraries.
- Built interactive data dashboards using Elm (available online at: <https://misshula.org/myfta.html>)

Data Scientist, *Misdemeanor Justice Project (MJP)* *October 2016 - March 2018*

The MJP strives to provide an empirical framework to data-driven policy initiatives at local, state, and national levels aimed at improving societys response to low-level offenses. Recruited by principal investigator to design defensible strategy for comparing data across varying criminal codes and demographics.

- Responsible for all jurisdiction demographic population estimates using Rgeos, Rgdal, geosphere, acs and geosphere R libraries.
- Created demographic profiles for Jurisdiction selection
- Created logistic regression to predict legal insufficiency of NYC summonses over 20 years and 15 million records in R.

Project Manager, *Tech Talent Pipeline @ Queens College* *October 2015 - October 2016*

TTP Residency is a three-month program designed to connect local talent to paid technical internships at tech businesses throughout New York City. Delivered in partnership with the City University of New Yorks Queens College and the NY Code and Design Academy, TTP Residency connects qualified CUNY computer science majors to local businesses throughout NYC.

- Managed recruitment and placement for 50 CS interns at NYC tech startups (\$1 million budget)
- Increased applications 147% semester-on-semester
- Exceeded performance goals, including student placement and business recruitment

Adjunct Professor, *CUNY John Jay Math and Computer Science* *July 2012 - Present*

- Teaching programming languages including Python, Haskell and Elm.
- Teaching graduate statistics to the Police Leadership MA program to high ranking members of the NYPD (Captains to Chiefs).
- Taught advanced data structures, (2 sections, 45 students) in C++ using version control and unit testing.

GC Digital Fellow, *CUNY Graduate Center* *September 2014 - May 2015*

- Gave lecture on reproducibility which has been viewed more than 11,000 times on YouTube.
- Brought one of the founders of the Free Software Foundation to speak at the CUNY Graduate Center.
- Taught workshops on version control, data management, R and Python.

Statistical Analyst, CUNY John Jay Research & Evaluation

July 2012 - August 2014

- Responsible for designing statistical tests for a wide variety of projects
- Created web mapping tools using d3, TileMill and Leaflet
- Evaluated anti-violence program using DiD and spatial statistics
- Estimated prison populations using ARIMA and queuing theory funded by Pew Charitable Trust.

Data Science for Social Good, University of Chicago

Summer 2013

- Developed neighborhood and property analytics software for Cook County Landbank delivered as a Django/Python application
- Integrated mapping, economic and demographic data using iPython, Pandas, SciPy, iGraph and Matplotlib.

Research Associate, Research Foundation CUNY

February 2010 - May 2013

- Responsible for designing statistical tests on social networks for a wide variety of projects including methamphetamine use, prison simulation and suicide
- Created prison simulation in Java
- Created estimate of NYC Methamphetamine using population for USDoJ using SNA and iGraph.
- Conducted original research on public health and criminal justice issues including and suicide, domestic violence supported by NIH and NSF.
- Conducted original research on detecting causal relations supported by CUNY Advanced Research Collaborative in C++

Freelance Projects:

- World Bank: Designed and created poverty maps to report on density of South African Poverty using Rgeos, Python and QGIS. CMDTY Partners, LP; Taught investment professionals Python and Programming
- John Jay Police Executive MA: Designed survey and reported results on student skills and satisfaction for internal use and outside reporting to the Office of the First Deputy Commissioner who funded the program.
- John Jay Office of Sponsored Research: Retained to give 6 workshops on Open Source research tools including R, Emacs, LaTeX, Spatial Analysis, Elm and Git for research active faculty.

Additional Experience in Finance: Goldman Sachs: VP Trading and Arbitrage, ING Bank: VP International Convertible Sales, HSBC Bank: VP International Convertible Sales, ValueVest: Portfolio Manager, SANE Group, Principal

Volunteer Experience: Columbia University Criminal Justice Project- Coding @Rikers, Exodus Transitional Community, Fortune Society/College Initiative, Math GED Head Tutor, Ottisville Federal Prison Camp

SKILLS

Interpreted Languages: R (proficient), Python (proficient), L^AT_EX

Compiled Languages: Haskell (proficient), Elm, Scala

Machine Learning: Glmnet, caret, Spark, MLlib, Sci-Kit Learn

Databases: MySql, Postgres, Postgis

FELLOWSHIPS, AWARDS AND HONORS

Funded Student, DARPA's Probab. Programming For Adv. Machine Learning (PPAML) Summer 2017

First place team, HeatseekNYC's Hack for Heat December 2015

First place team, AT&T Wireless Hackathon for Good September 2015

Provost's Digital Initiative grant winner, CUNY Graduate Center 2013 -2014

Steven and Elly Hammerman ethics across the curriculum, CUNY John Jay 2012

US Cyberchallenge student fellow, Eastern Regional Camp (Virginia) 2011 & 2012

DHS Data Science Summer fellow, Univ of Illinois, Urbana-Champaigne 2010

Sunshine Scholarship, College Initiative 2009 - 2014

EDUCATION

BS Applied Math (Operations Research) and BA Economics & Mathematics *May 1988*
Yale University, New Haven, CT

MS in the Mathematics of Finance *9 remaining credits to degree completion, current 4.0 GPA*
Columbia University, New York, NY

PhD Criminal Justice (ABD) *December 2018 (expected) GPA 3.43 (CS) 3.85*
City University of New York, New York, NY