

M.S. in Analytics

Concentration in Data Science

Georgetown University
The Graduate School of Arts & Sciences
April 10, 2017

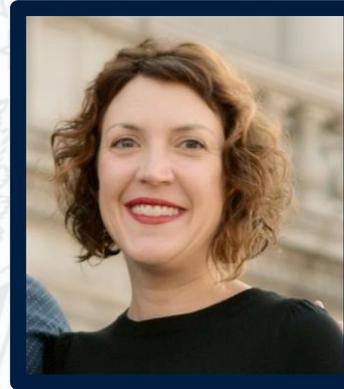


GEORGETOWN UNIVERSITY

Presenters



Todd K. Leen, PhD
Program Director;
Professor



Heather Connor
Program Coordinator

Student Participants: Arif Ali (program alum)

Jordan Bramble (2nd year student)

Data Science Overview

Curriculum

Admissions

Applicant Demographics (AY '16-'17)

Internships and Employment

Q & A --- w/ Current and Past Students

Additional Information

What is Data Science

Data Science is rapidly growing interdisciplinary field that combines **computer science**, **statistics**, and **mathematical modeling** to obtain insights, knowledge, and predictive capability about processes from data.

What is Data Science

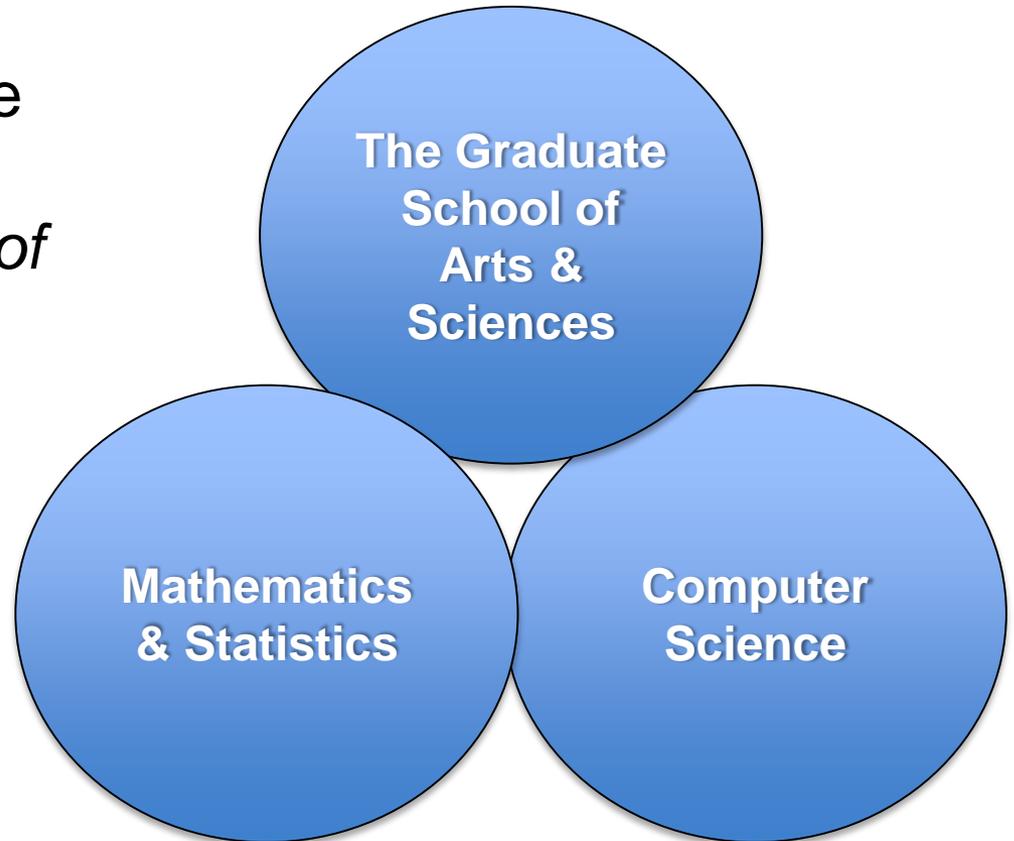
There is enormous need for talent in data science to sustain this revolution in business and industry.

In a recent report of the McKinsey Global Institute, "By 2018, the United States alone could face a shortage of **140,000** to **190,000** people with *deep analytical skills* as well as **1.5 million** managers and analysts with the knowhow to use the analysis of big data to make effective decisions."

SOURCE: McKinsey Global Institute analysis

Georgetown Graduate Analytics

M.S. in Analytics is an interdisciplinary degree program offered by *The Graduate School of Arts & Sciences*



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30 Credit Program

- Online, no-cost asynchronous summer prep course on advanced Python, R, and command line programming in the summer prior to matriculation
 - Required for incoming students who do not have a computer science degree and adequate preparation
 - Can be waived on discussion with the Program Director (Todd Leen) or Program Coordinator (Heather Connor)
 - Georgetown Summer Session II (July 10 - August 11)
- The five-course, 15-credit core gives students a strong working knowledge of computer science and statistical methods central to data science.
- 15 additional elective credits offered by the Analytics program or departments throughout the graduate school.

*As the data science landscape continues to change and grow,
so will our core and elective offerings.*

Curriculum

Core Courses Required		
Course Number	Course Title	Credits
	Summer Programming Prep Course	0
ANLY-501	Introduction to Data Analytics	3
ANLY-502	Massive Data Fundamentals	3
ANLY-503	Scientific and Analytical Visualization	3
ANLY-511	Probabilistic Modeling and Statistical Computing	3
ANLY-512	Statistical Learning for Analytics	3

Curriculum

Electives Offered by the Analytics Program		
Course Number	Course Title	Credits
ANLY-520	Effective Presentation for Technology & Science	3
ANLY-531	Databases	3
ANLY-540	Technology & Policy for Data Privacy	3
ANLY-550	Structures and Algorithms for Analytics	3
ANLY-561	Optimization	3
ANLY-570	Decision and Game-Theoretic Analysis	3
ANLY-905	Internship	.25

Additional electives coming in text processing
and advanced machine learning,

Curriculum

Electives		Popular Offerings from Math & Comp Sci	
Course Number	Course Title		Credits
COSC-455	Image Processing		3
COSC-572	Natural Language Processing		3
COSC-578	Statistical Machine Learning		3
COSC-589	Web Search and Sense-Making		3
MATH-412	Mathematics of Climate		3
MATH-611	Stochastic Simulation		3
MATH-640	Bayesian Statistics		3
MATH-645	Categorical Data Analysis		3

Electives also available in Public Policy, Business, and Biostatistics

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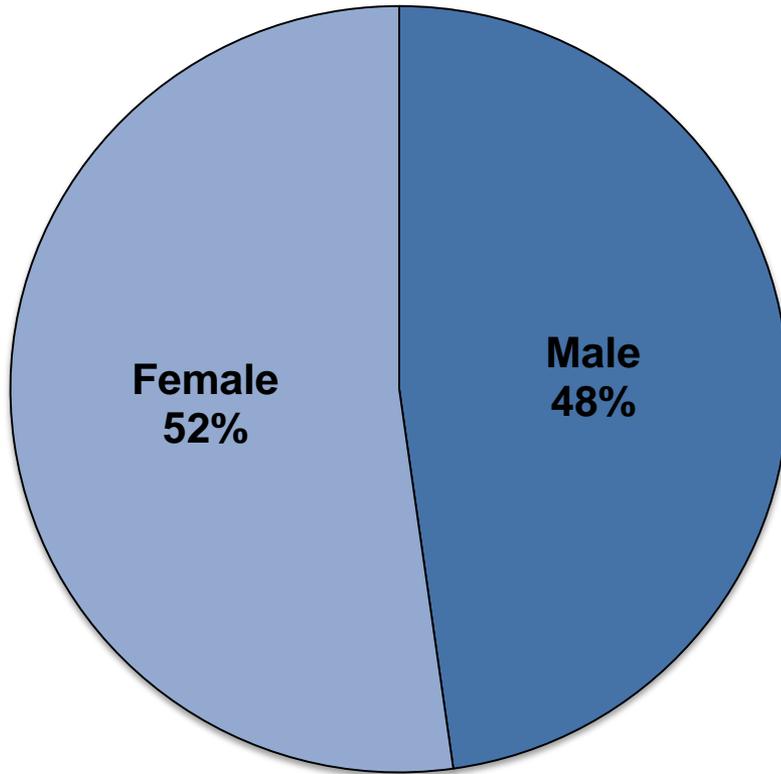
Internships and Employment

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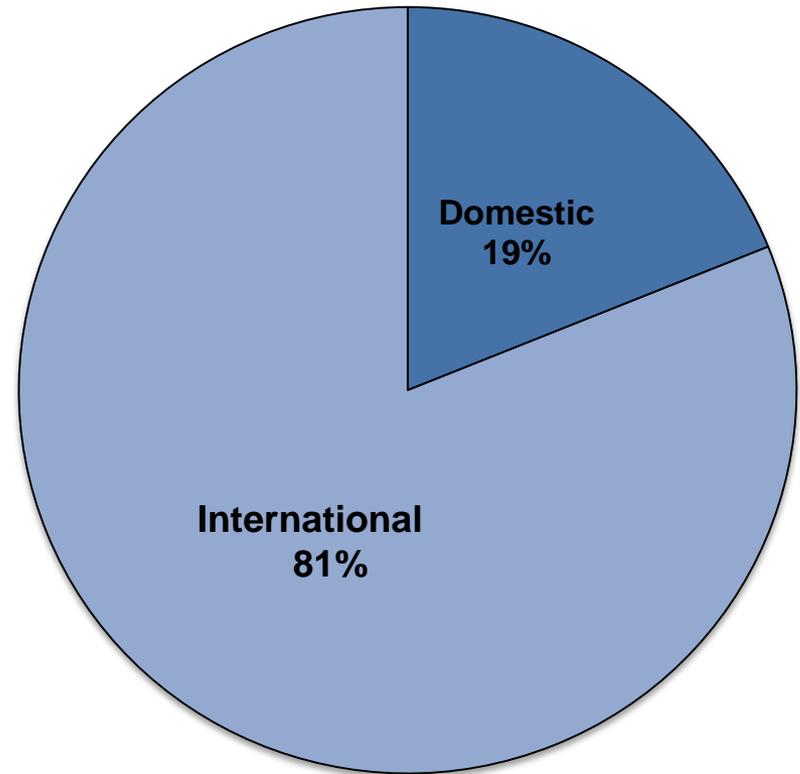
Additional Information

Applicant Demographics

Gender

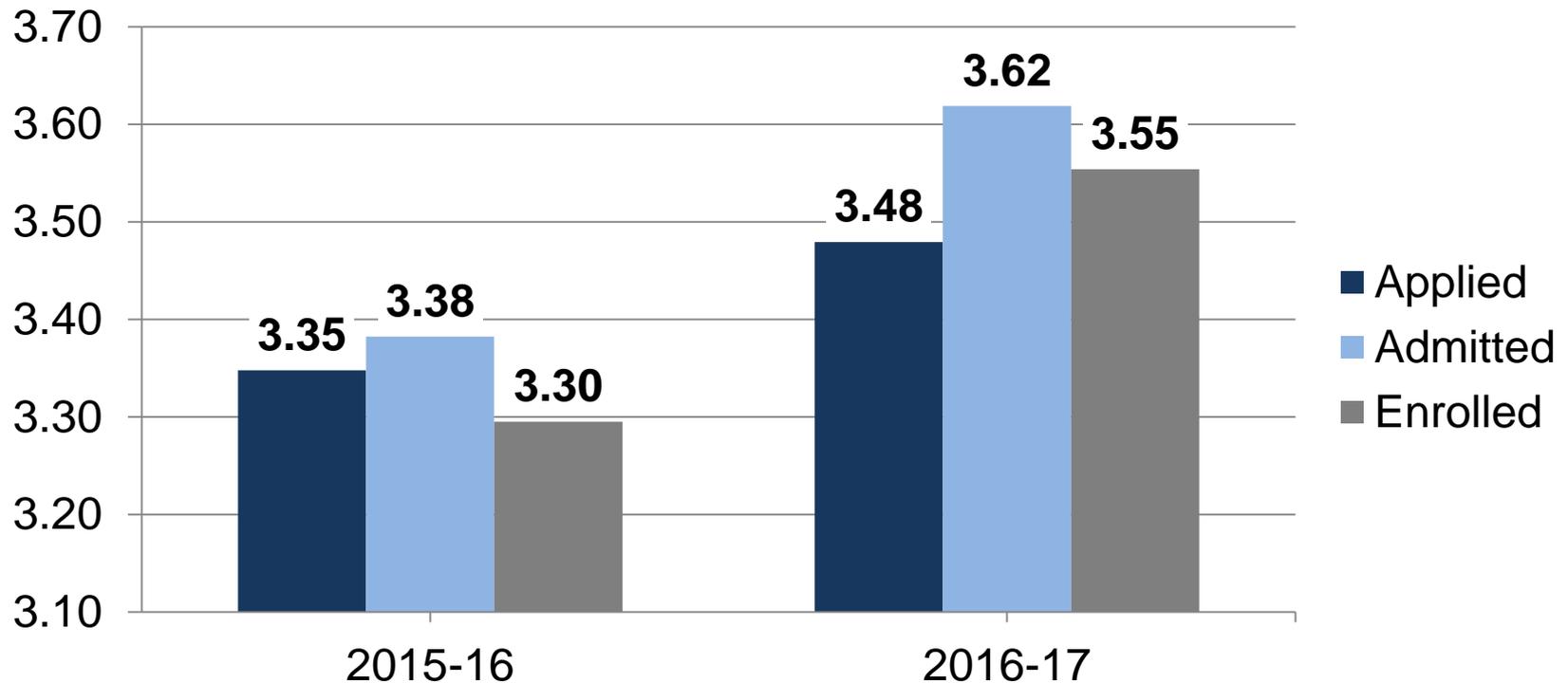


Nationality



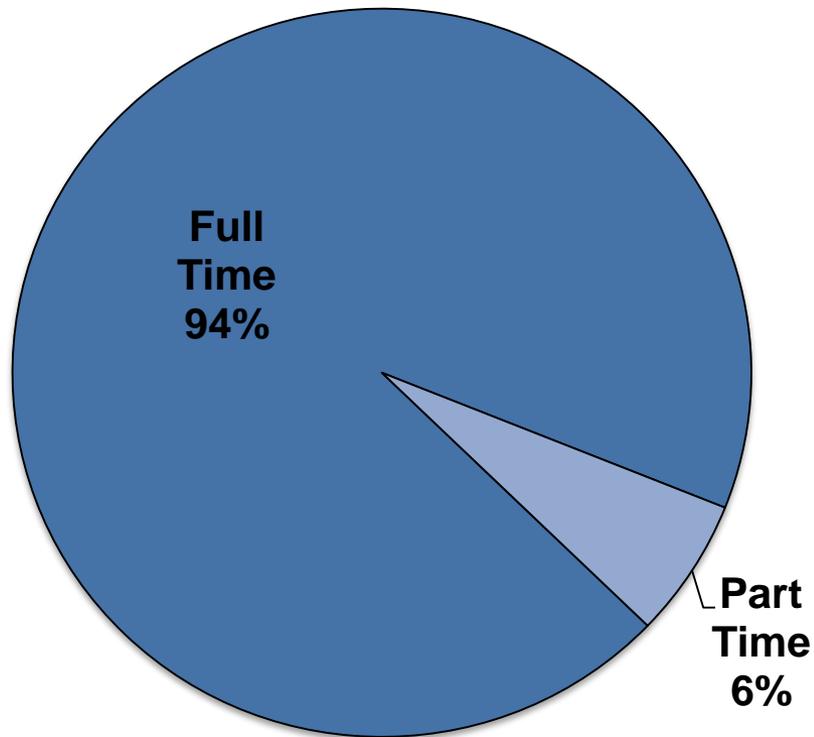
Applicant Demographics

Average Undergrad GPA Trends

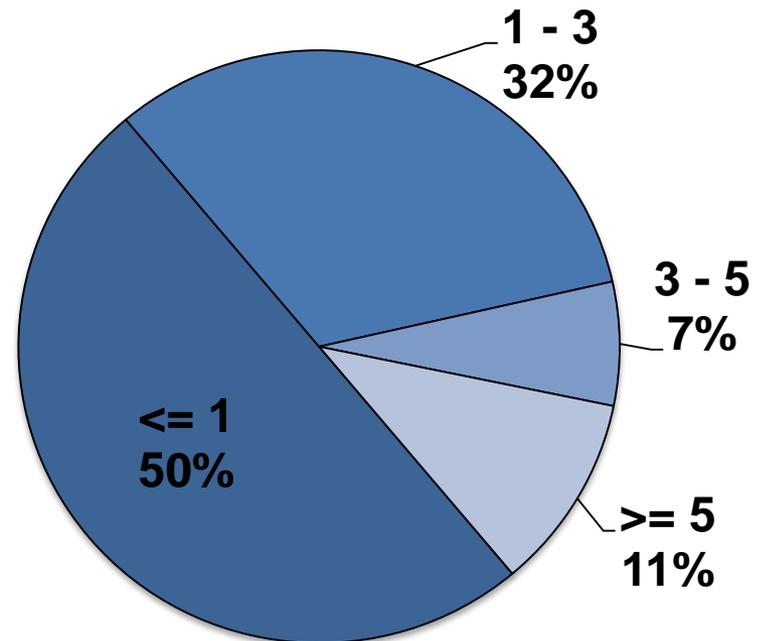


Applicant Demographics

Applicant Status



Work Experience (years)



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Internships, Research, and Post-Graduate Employment

- The Cawley Career Center serves Georgetown graduate students, providing guidance, coaching and interviews for both internship and post-graduation employment opportunities.

In fall 2017 we will offer a career fair specifically for Analytics students

- The Analytics program has placed interns at Lawrence Livermore National Laboratory (LLNL) and interns and graduates at multinational companies, at non-profit orgs, and at small boutique firms. We have current part-time students at area companies that are providing opportunities.

Internships, Research, and Post-Graduate Employment

- Georgetown University is developing a strategic liaison with LLNL with Analytics in a prime role.
- There are paid research opportunities on campus (e.g. Public Policy, Computer Science).
- The Analytics program is building new corporate relationships to enable curriculum expansion, internships, and post-graduate employment (e.g. Booz, Allen, Hamilton; Deloitte; Capital One ...)

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Question & Answer Session



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Thank You for Attending!

If you have other questions that we were unable to answer during this webinar, please email

gradanalytics@georgetown.edu

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