

## MASTER OF SCIENCE IN ANALYTICS

# 2020 EMPLOYMENT REPORT

Number of graduates:	119
Number of graduates seeking new employment:	116
Percent receiving one or more offers of employment:	83%
Percent employed at graduation:	79%
Number of U.S. citizens/permanent residents:	103
Percent receiving one or more offers of employment:	87%
Percent employed at graduation:	83%
Average base salary:	\$99,800
Median net increase in earnings:	73%
Median ROI payback period (in months):	25
Number of employers interviewing / number on site:	182 / 36
Median number of initial job interviews per candidate:	11
Job placements facilitated by the Institute:	94%
Job placements based in North Carolina:	37%
Job placements based in U.S.:	100%
Candidates reporting salary data:	99%

Placement results for Class of 2020 reported upon graduation, May 15, 2020.

## **STATEMENT BY THE DIRECTOR ON THE IMPACT OF THE CORONAVIRUS PANDEMIC**

The Institute is deeply committed to achieving the best possible outcomes for its students. Since its first cohort, which graduated in 2008, the Institute has built a solid reputation in terms of the employability of its graduates. Based on surveys within the university and data from comparable programs at other schools, the Institute has done very well. Its decade-long track record for the rate of job placement and average compensation is well above average.

The Institute facilitates job placement for over 90% of its students. The process begins in mid-January each year, when the Institute opens its doors to employers seeking to interview candidates, and culminates (for most students) in March with the acceptance of job offers. The COVID19 pandemic—and the national emergency declared on March 13th that led to the exodus of students from campus—came at precisely the moment to have the greatest detriment on the final stage of job offers and acceptances.

The 2020 placement season began as normal. Students logged 1,200 initial job interviews by mid-March, compared to 1,300 in recent years. It is with respect to job offers where the impact of the pandemic can be seen most clearly. Offers in March were 25% below the three-year average. Be that as it may, students accumulated nearly 200 offers, in total, with an aggregate dollar value of \$19.5 million. The average offer (base salary and signing bonus) was \$103,000. While the number of job offers was substantial relative to the number of candidates searching, ultimately the spread of offers across the cohort was below the norm: 83% of students garnered one or more offers, compared to 95% in recent years.

As the economic consequences of the pandemic deepened, employers naturally slowed their hiring activities. From mid-March onward, many employers imposed a hiring freeze. Five students reported having a pending offer put on hold to await approval of a senior executive. Three students accepted job offers that were later rescinded; two were quickly rehired by other employers. International students seeking employment under OPT (11% of the cohort) fared less well, with a 54% placement rate versus 83% for citizens and permanent residents. Growing uncertainty over U.S. immigration policy and the future availability of work visas made the situation even more difficult for non-citizens to find employment.

The Institute is disheartened beyond measure by the way the semester ended. Nonetheless, given the circumstances, it is grateful for what was accomplished. All of our students finished the spring semester to earn their degree while remaining in good health. Four out of five secured employment. Half of those employed realized gains in annual income of 70% or more. Average salaries remained strong. At a time when unemployment sky-rocketed to the highest level in modern history, the Institute is gratified by the success of its students.

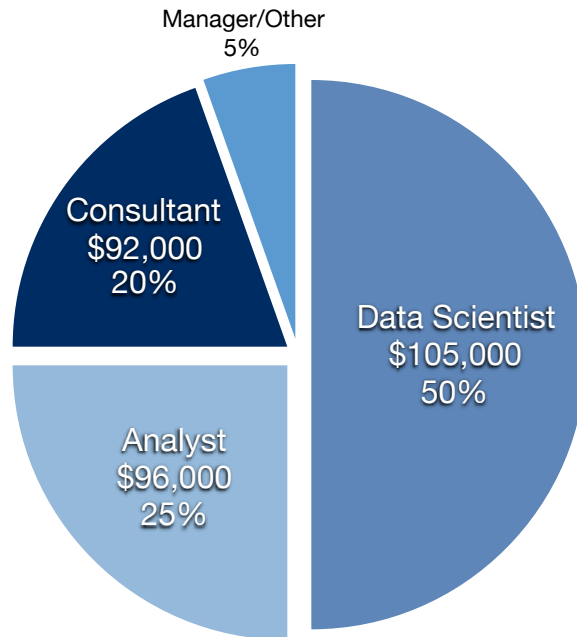
Uncertainty in labor markets as a result of the pandemic will present challenges in the years ahead. Until the day when a combination of clinical treatment and vaccines mitigate the threat of the coronavirus to human health, we must deal with the new reality. The Institute has already begun to evaluate every aspect of its placement process to see what changes can be made to improve employment outcomes for students in the Class of '21 and beyond. The Institute's past success is attributable, in large part, to being proactive and being able to quickly adapt to changing circumstances. The demand for data scientists will continue, even in the most difficult economic times. The Institute is committed to meeting the demand by doing what it does best: producing exceptional talent.

The Institute expresses its gratitude to employers for their steadfast commitment to hiring our students. As for the members of Class of '20 who continue to search, the Institute will work with them to secure employment in the coming weeks. An addendum to this report will be published in August, 90-days after graduation, to document what is accomplished.

## POSITIONS FILLED

<p>Advanced Analytics Specialist (5)</p> <p>Associate (3)</p> <p>Associate Consultant (3)</p> <p>Bioinformatician</p> <p>Business Analyst, Data Scientist</p> <p>Business Analytics Advisor</p> <p>Business Information Consultant</p> <p>Client &amp; Business Intelligence Analyst</p> <p>Consultant (3)</p> <p>Data Analyst (9)</p> <p>Data and Analytics Analyst</p> <p>Data Engineer</p> <p>Data Science Advisor</p> <p>Data Scientist (31)</p> <p>Financial Modeling Analyst (2)</p>	<p>Internal Auditor - Analytics</p> <p>Manager, Data Analytics and Insights</p> <p>Marketing Analytics Specialist</p> <p>Quantitative Analytics Specialist</p> <p>Senior Analyst (3)</p> <p>Senior Analyst, Data Scientist (3)</p> <p>Senior Analyst, Data Science</p> <p>Senior Business Analyst (2)</p> <p>Senior Consultant (4)</p> <p>Senior Data Scientist</p> <p>Senior Manager, Mobile Analytics</p> <p>Software Developer (2)</p> <p>Software Engineer, Data &amp; Analytics</p> <p>Staff Consultant (4)</p> <p>Statistician</p>
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## MAJOR TYPES OF POSITIONS AND AVERAGE BASE SALARIES



## COMPENSATION BY EXPERIENCE LEVEL

	ANNUAL BASE SALARY				SIGNING BONUS
	Total	Prior Work Experience			
		None	1-2 Years	3+ Years	
Mean	\$99,800	\$95,000	\$100,700	\$110,900	\$10,400
Maximum	\$130,000	\$115,000	\$130,000	\$130,000	\$25,000
75th Percentile	\$110,000	\$100,000	\$110,000	\$115,000	\$10,000
Median	\$98,000	\$95,000	\$100,000	\$112,000	\$10,000
25th Percentile	\$90,000	\$90,000	\$90,000	\$107,500	\$8,000
Minimum	\$74,400	\$74,400	\$75,000	\$85,000	\$3,000
N	91	49	23	19	74
% Reporting	99%	54%	25%	21%	81%

Notes: Data with respect to salaries and bonuses are self-reported by graduates (without anonymity) and whenever possible verified by employers in cases where placement is arranged by the Institute (i.e., most candidates). One graduate was on leave from the government and returned to public service. All other job placements are full-time paid positions. Data are made public here to guide prospective students and employers. Annual base salary figures do not include signing bonuses, relocation allowances or other forms of one-time compensation guaranteed upon signing. Conditional job offers (i.e., those requiring security clearance prior to employment) are not included in salary data. As a STEM-qualified degree, international MSA graduates are eligible for Optional Practical Training (OPT). Commencement is typically held on the first Saturday in May, and data are reported each year as of May 15th for consistency.

**DISCLAIMER:** The Institute has a proven track record for placing graduates in the analytics profession, but it does not under any circumstance offer a guarantee of employment upon completion of the degree.

## EMPLOYERS

(n = 53; with 40 employers succeeding in hiring one or more candidates)

### **Aetna CVS**

Aktana

### **Allstate**

### **Ankura\***

### **Asurion**

BAE Systems

### **Bain & Company\***

### **Bank of America**

### **Beghou Consulting\***

### **Cigna\***

City of Charlotte, North Carolina

Delta Airlines

Deutsche Bank

### **DISH Network**

### **Duke Clinical Research Institute**

### **Elder Research\***

### **Elevate Credit\***

Elicit Insights

### **EY\***

### **Federal Reserve Bank of St. Louis**

### **Fidelity Investments\***

### **Fifth Third Bank\***

### **GoDaddy\***

### **Guidehouse\***

Hanesbrands

Health Care Service Corporation

### **JPMorgan Chase\***

### **LearnPlatform**

### **Lowe's Companies**

### **Marathon Petroleum**

### **McKinsey & Company**

Mercy Health

### **MetLife**

### **North Carolina Joint Underwriting Association\***

### **PenFed Credit Union\***

Progressive Leasing

Putnam Investments

### **Q2ebanking**

Radiance Technologies

### **Red Hat\***

### **Red Ventures**

### **RTI International**

SAS

### **Slalom Consulting**

### **State Employees' Credit Union\***

### **T. Rowe Price**

### **The Home Depot\***

### **Tresata**

### **Truist Financial (formerly BB&T)\***

Varonis

### **Verizon\***

### **Wake Forest Baptist Health**

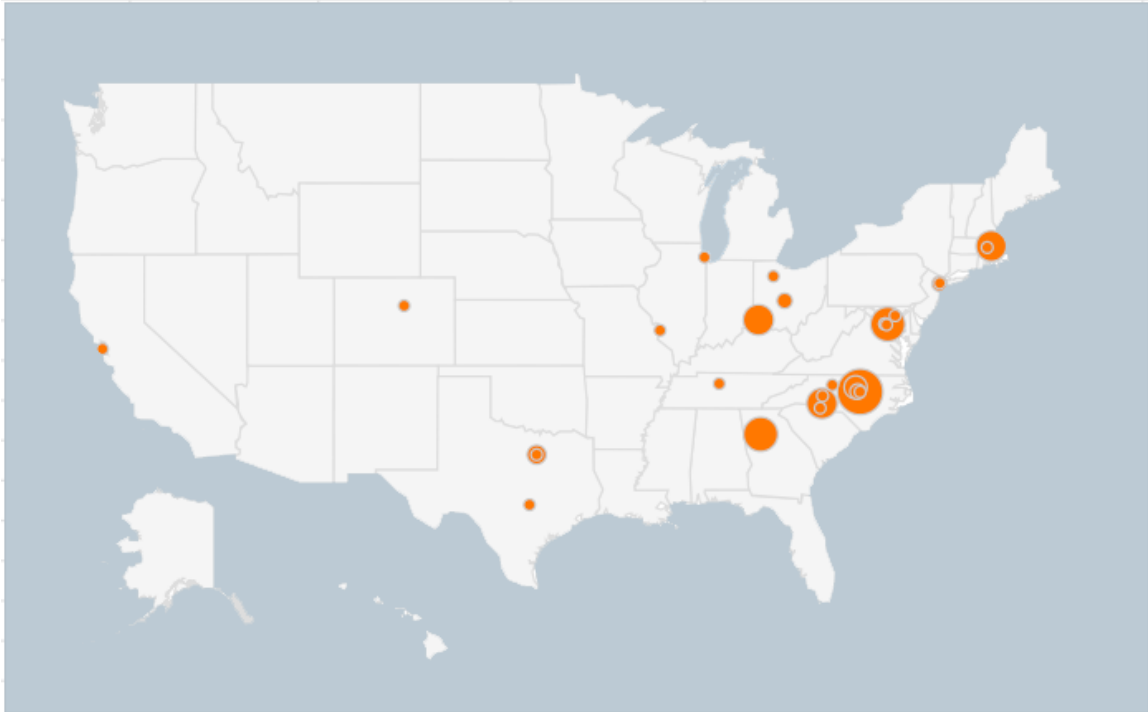
### **Wells Fargo**

**Bold** = employers that succeeded in hiring one or more candidates.

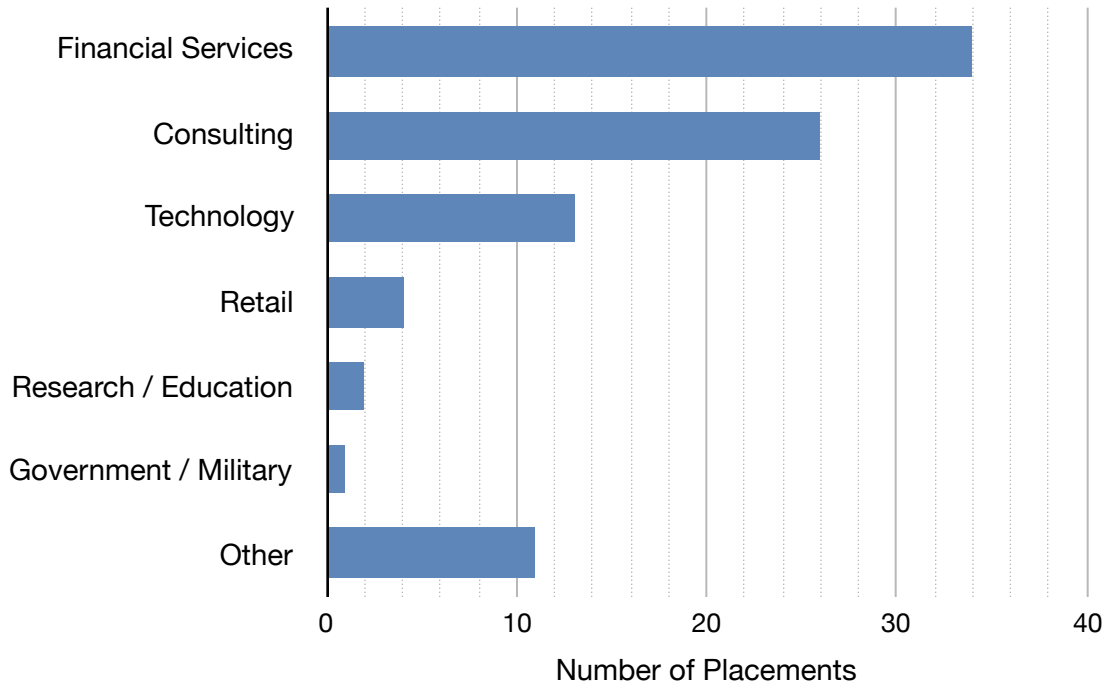
\* = employers that hired more than one candidate.

*List does not include conditional offers (i.e., those requiring security clearance) made by agencies of the federal government.*

## EMPLOYMENT BY GEOGRAPHIC LOCATION



## DISTRIBUTION OF EMPLOYMENT BY INDUSTRY SECTOR

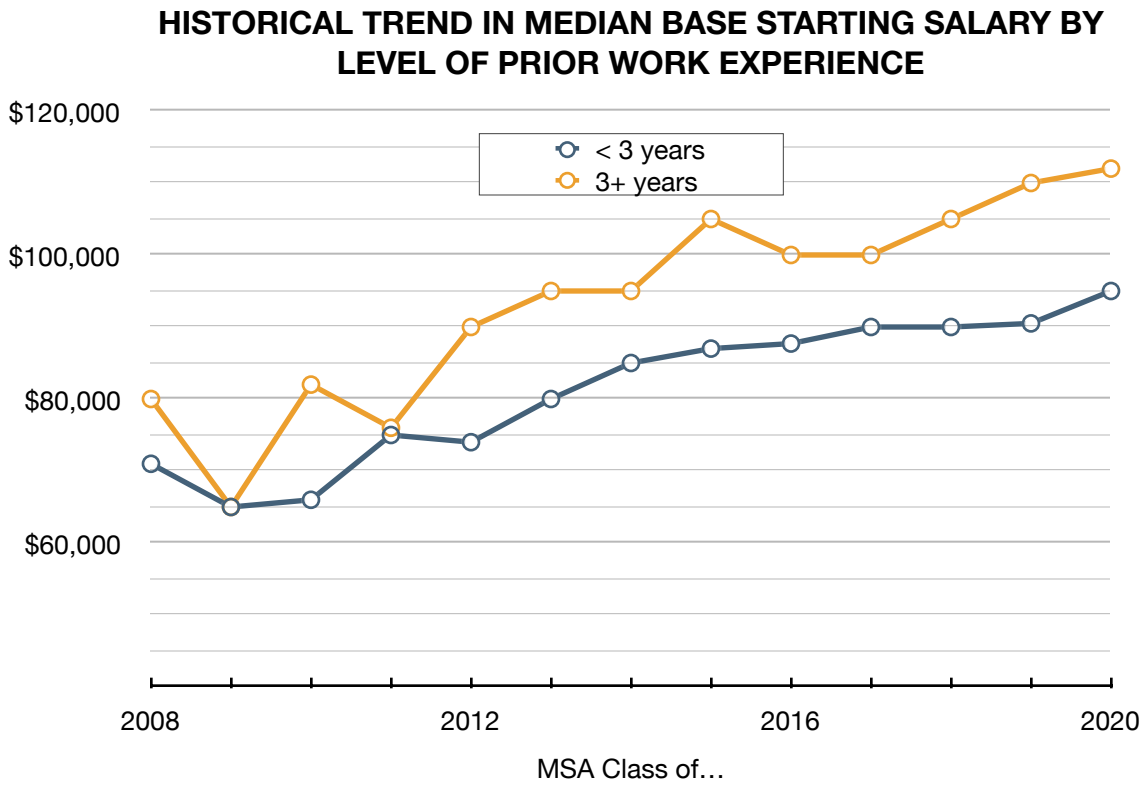
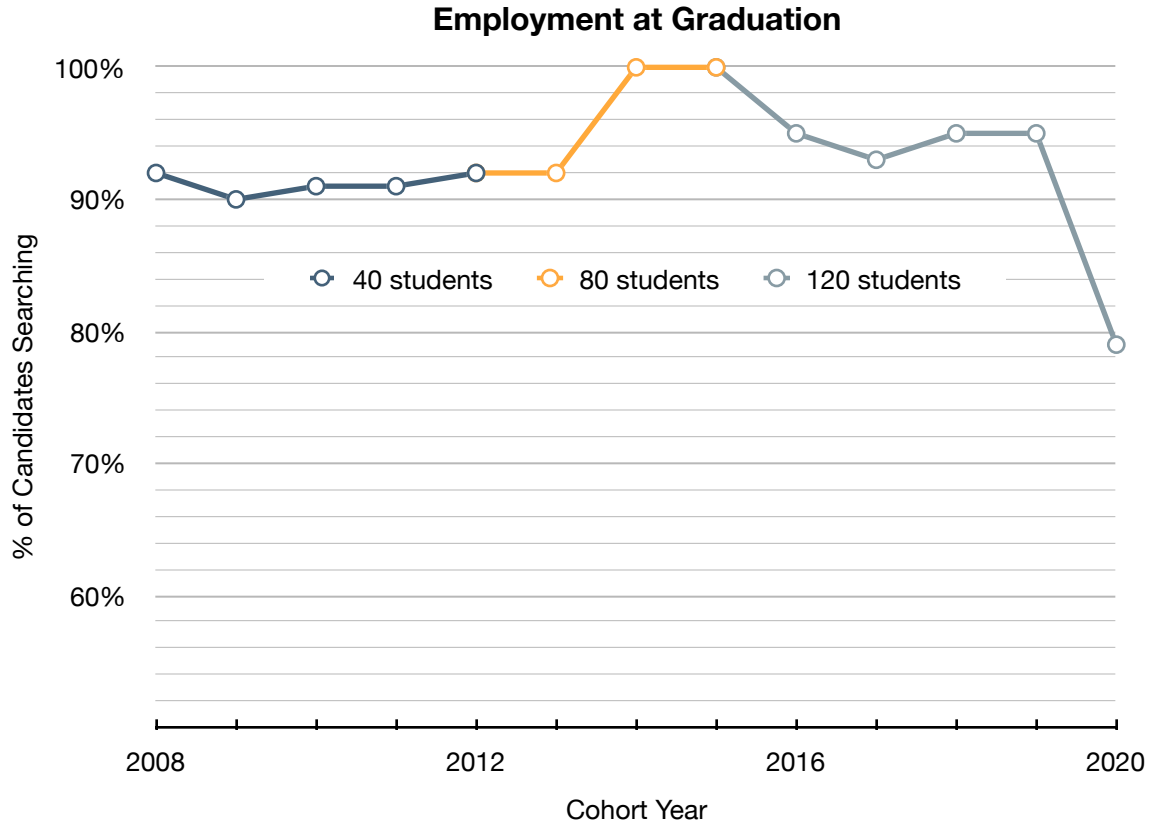


## COMPENSATION BY MAJOR POSITION CATEGORIES

	ANNUAL BASE SALARY				
	All	Data Scientist	Analyst	Consultant	Other
Mean	\$99,800	\$104,600	\$95,800	\$92,200	*
Maximum	\$130,000	\$130,000	\$125,000	\$110,000	*
75th Percentile	\$110,000	\$115,000	\$99,000	\$90,000	*
Median	\$98,000	\$105,000	\$95,000	\$90,000	*
25th Percentile	\$90,000	\$95,000	\$89,000	\$86,250	*
Minimum	\$74,400	\$80,000	\$74,400	\$85,000	*
N	91	45	23	18	5
% of Total	100%	44%	25%	25%	6%

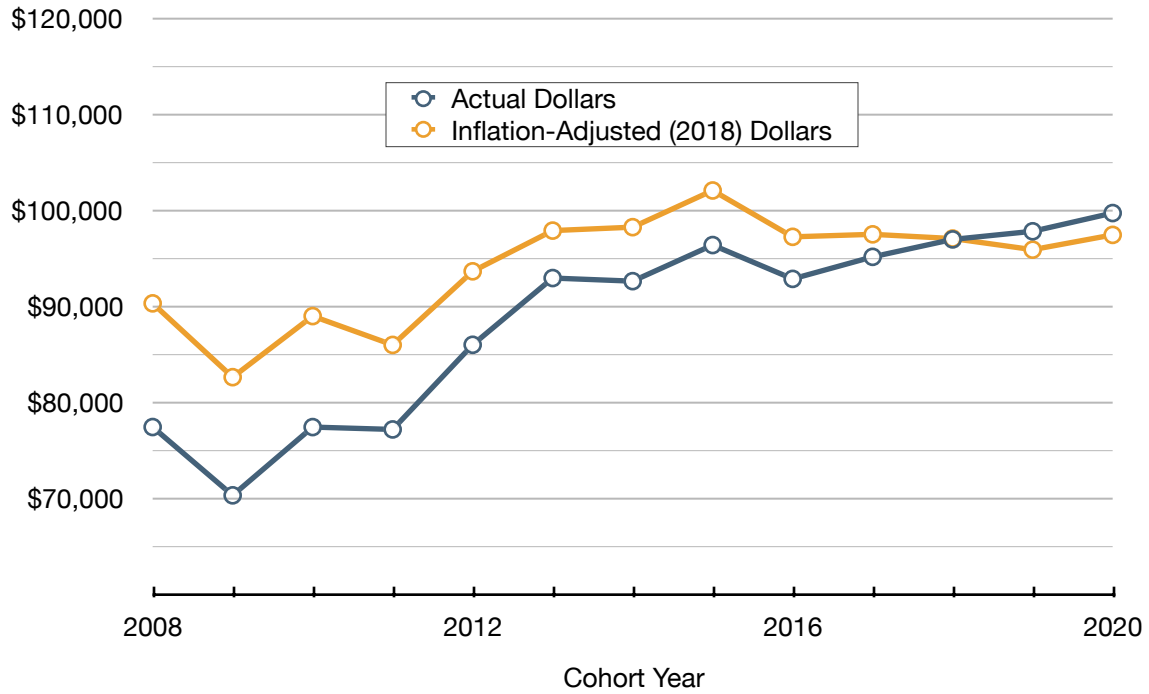
## COMPENSATION BY AGE AND GENDER

	ANNUAL BASE SALARY					
	All	Age Brackets			Gender	
		20-24	25-29	30+	Men	Women
Mean	\$99,800	\$95,600	\$103,600	\$112,600	\$99,900	\$99,600
Maximum	\$130,000	\$130,000	\$130,000	\$127,000	\$130,000	\$127,000
75th Percentile	\$110,000	\$103,500	\$115,000	\$115,000	\$110,000	\$110,000
Median	\$98,000	\$95,000	\$105,000	\$115,000	\$95,000	\$98,000
25th Percentile	\$90,000	\$90,000	\$94,500	\$110,000	\$90,000	\$90,000
Minimum	\$74,400	\$74,400	\$85,000	\$95,000	\$80,000	\$74,400
N	91	56	24	11	47	44
% of Total	100%	62%	26%	12%	52%	48%

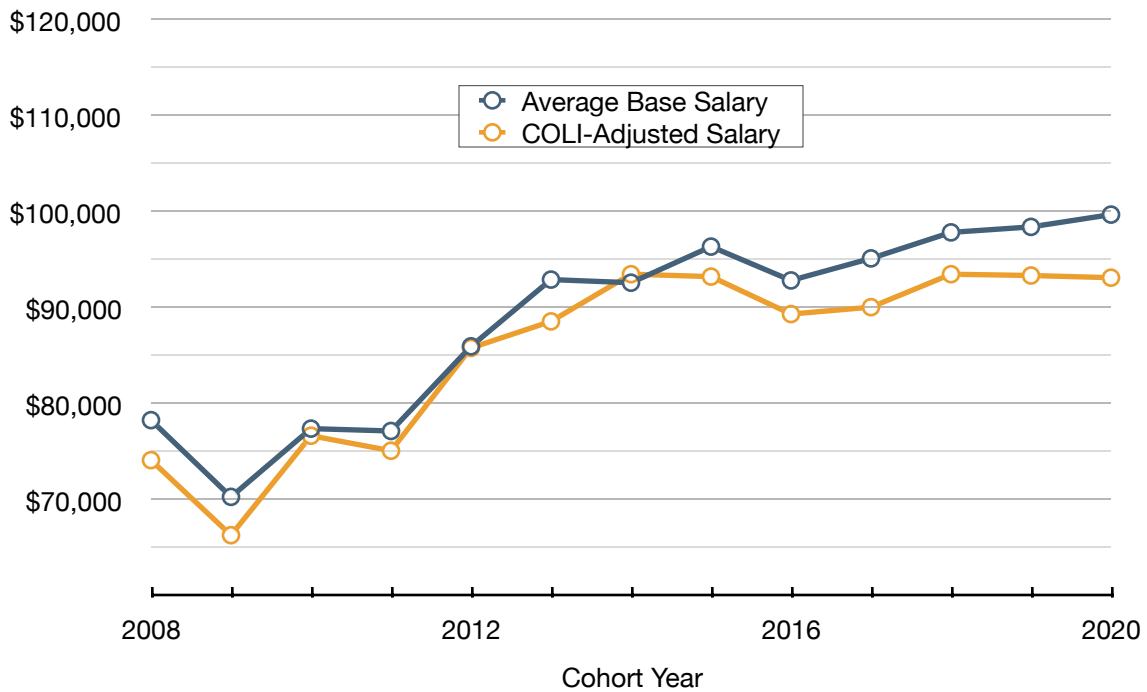




### INFLATION-ADJUSTED AVERAGE BASE SALARY BY COHORT YEAR



### COST OF LIVING INDEX (COLI) ADJUSTED AVERAGE BASE SALARY BY LOCATION OF EMPLOYMENT



## STUDENT RETURN ON INVESTMENT

	NC Resident	Non-Resident
Number of Respondents	28	13
Pre-MSA Salary Median*	\$56,000	\$62,000
(+) Tuition & Fees	\$26,500	\$46,500
(-) Signing Bonus	\$10,000	\$10,000
Total Investment	\$72,500	\$98,500
Post MSA Salary Median	\$105,000	\$100,000
(-) Pre-MSA Salary	\$56,000	\$62,000
Net Salary Increase	\$49,000	\$38,000
Payback Period (months)	18	31
Net Increase in Earnings	88%	61%

Based on graduates with full-time employment prior to program entry. The median net increase in salary for all 41 graduates was \$42,500.

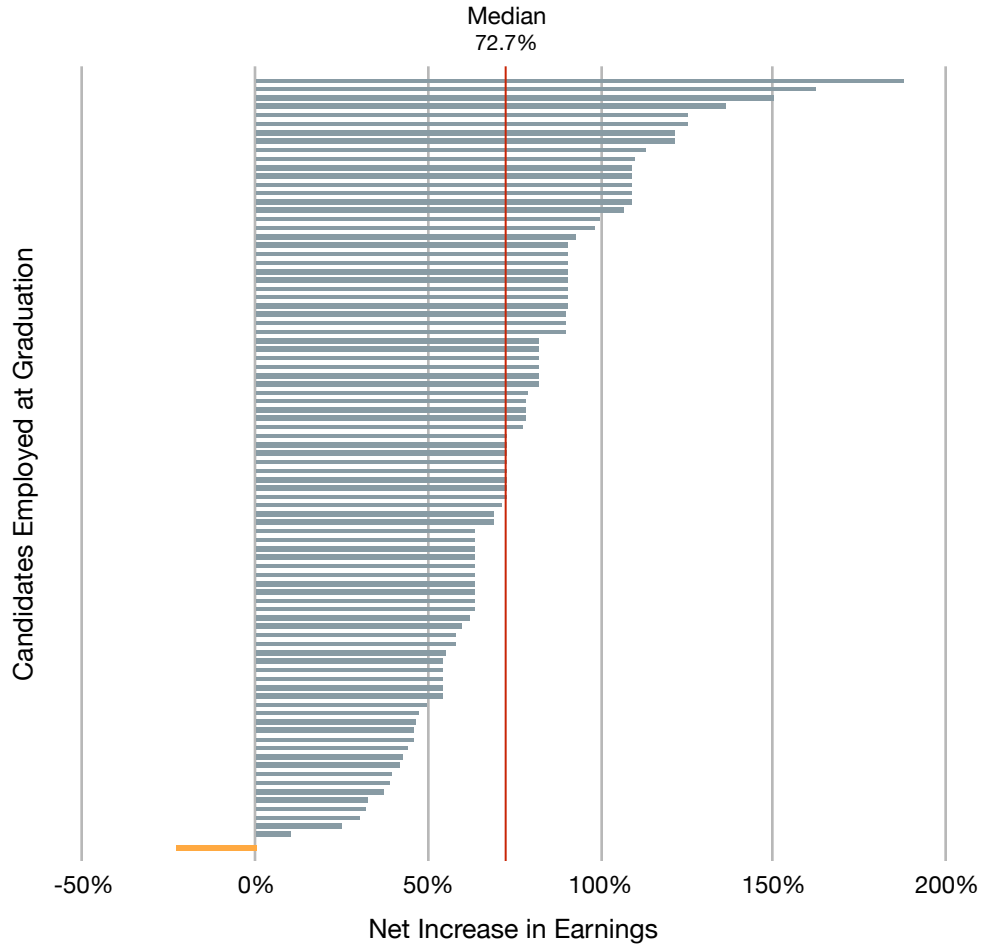
## PAYBACK PERIOD CALCULATION

$$\text{Payback Period (in months)} = \frac{(\text{Pre-MSA Salary} + \text{Tuition}) - \text{Signing Bonus}}{\text{Post-MSA Salary} - \text{Pre-MSA Salary}} \times 12$$

Notes: Respondents provided information about their pre- and post-MSA annual base salaries, signing bonuses, and residency status (which determines tuition payments). The median salary increase was \$42,500; all but one respondent reported an increase in salary. The ROI payback period is calculated for each candidate employed by graduation, based on their individual circumstances (residency, tuition, pre- and post-salaries, and signing bonuses)..

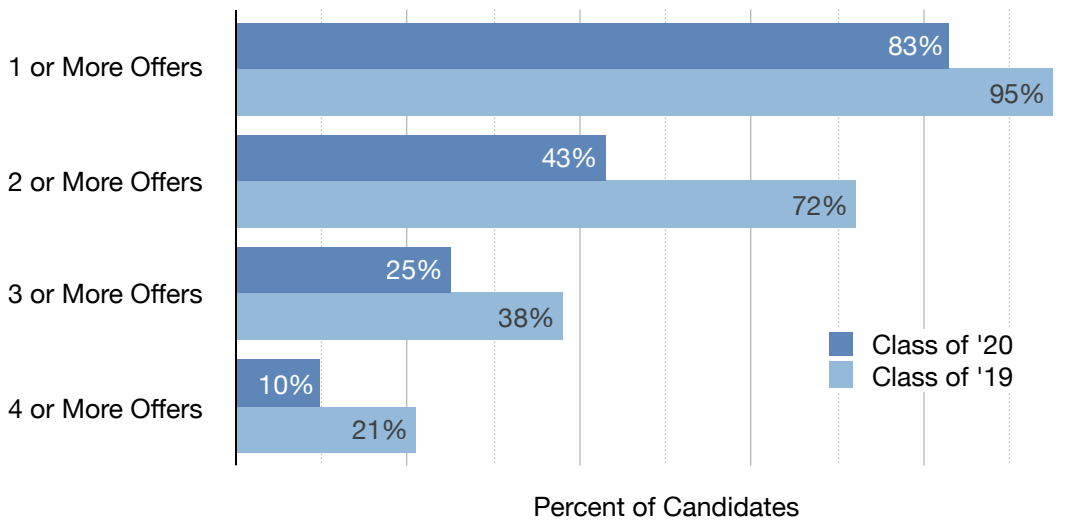
Students are assumed to forgo one-year of earning, even though the MSA program is only 10-months in duration. Pre-MSA salaries ranged from \$33,000 to \$165,000. The payback calculation does not take into consideration interest incurred by students who borrow to finance their education.

## NET INCREASE IN EARNINGS FOR CANDIDATES EMPLOYED AT GRADUATION, RANK ORDERED



Note: The net increase in earnings calculation for candidates with no prior work experience is inputted based on the median earnings of candidates with 1-2 years of work experience (\$55,000).

## NUMBER OF JOB OFFERS RECEIVED BY GRADUATION



### COMPENSATION BY INDUSTRY SECTOR

	ANNUAL BASE SALARY				
	All Sectors	Consulting	Financial	Technology	Other
Mean	\$99,800	\$97,300	\$104,700	\$99,000	\$93,900
Maximum	\$130,000	\$130,000	\$130,000	\$125,000	\$112,000
75th Percentile	\$110,000	\$105,000	\$115,000	\$110,000	\$98,000
Median	\$98,000	\$90,000	\$105,000	\$100,000	\$95,000
25th Percentile	\$90,000	\$90,000	\$96,250	\$90,000	\$93,000
Minimum	\$74,400	\$85,000	\$75,000	\$80,000	\$74,400
N	91	26	34	13	17
% of Total	100%	29%	38%	14%	19%

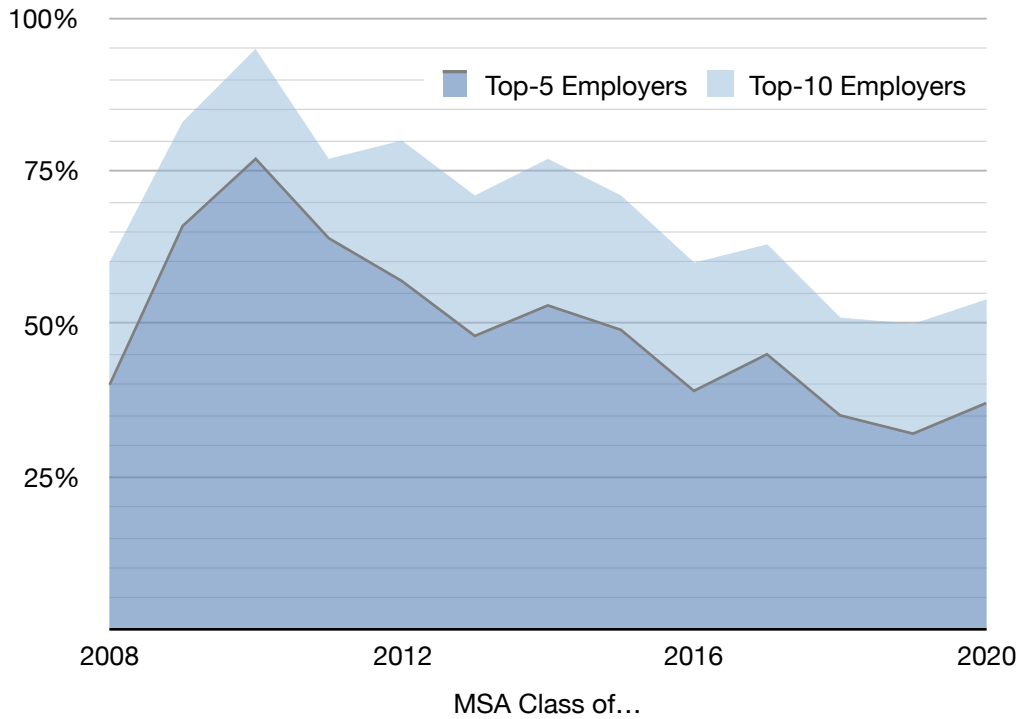
### COMPENSATION BY GEOGRAPHIC REGION

	ANNUAL BASE SALARY				
	North Carolina	U.S. Census Regions Outside North Carolina			
		South	Northeast	Midwest	West
Mean	\$96,500	\$97,300	\$106,800	\$107,700	*
Maximum	\$125,000	\$127,000	\$130,000	\$115,000	*
75th Percentile	\$100,000	\$105,000	\$112,500	\$115,000	*
Median	\$95,000	\$95,000	\$105,000	\$115,000	*
25th Percentile	\$90,000	\$90,000	\$97,500	\$100,000	*
Minimum	\$74,400	\$75,000	\$90,000	\$80,000	*
N	33	32	11	13	2
% of Total	36%	35%	12%	15%	2%

### EMPLOYMENT BY RESIDENCY STATUS PRIOR TO ADMISSION

	Number of Candidates Employed		Subtotal
	Inside North Carolina	Outside North Carolina	
Non-Resident	6%	28%	35%
NC Resident	30%	35%	65%
<b>Subtotal</b>	<b>37%</b>	<b>63%</b>	<b>100%</b>

### PLACEMENT CONCENTRATION AMONG THE TOP-5 AND TOP-10 EMPLOYERS



RECRUITING TIMETABLE – MSA CLASS OF 2021	
New cohort of 120 students arrives:	June
Basic demographic profile of new cohort published:	July 1
New student roster available on Institute web site:	July 15
Employer information sessions hosted beginning first week of:	September
<b>Student Profile Book</b> available:	October 1
<b>Student Resume Book</b> sent to employers:	December 1
On-site interviews begin second week of:	January
Student placement decision date:	March 1
Graduation date normally in the first week of:	May
<b>Employment Report</b> published:	May 15
Candidates typically begin employment by the first week of:	June
Open job positions can be circulated to MSA alumni:	Upon receipt
MSA recruitment is managed entirely by the Institute as a service provided free of charge as a courtesy to employers.	

### DISCLAIMER

The Institute has a proven track record for placing graduates in the analytics profession, but it does not under any circumstance offer a guarantee of employment upon degree completion.

### DIRECTOR'S CERTIFICATION

The report of employment outcomes referred to above present fairly, in all material respects, the employment of the Institute's students at graduation as of May 15, 2020 in conformity with principles generally accepted among universities in the United States of America.

May 16, 2020

\_\_\_\_\_  
Date



\_\_\_\_\_  
Dr. Michael Rappa  
Institute Director

Source URL: <http://analytics.ncsu.edu/reports/employment/MSA2020.pdf>

NC STATE UNIVERSITY