Rethinking data requests via on-demand tools

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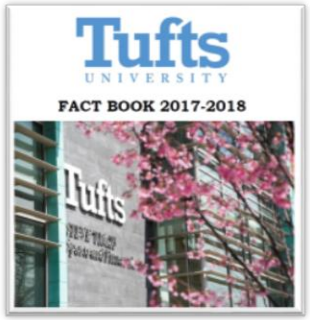
About Tufts OIR

- Tufts University
  - Private research university
  - Undergraduate, graduate, and professional students
  - Approximately 11,500 students
- Office of Institutional Research
  - Under the Provost's Office
  - 10 staff members

Primary Functions

- Core OIR Activities:
  - Survey research
  - Fact Book
  - Data requests and short-term projects
  - Business intelligence and data integrity
  - Mandated reporting & accreditation
  - University-level undertakings
  - Service to the university
  - Knowledge dissemination and service to the profession

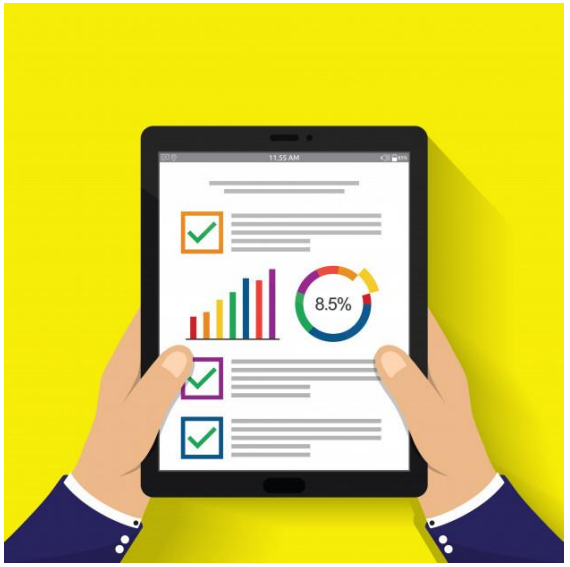


tableau

qualtrics

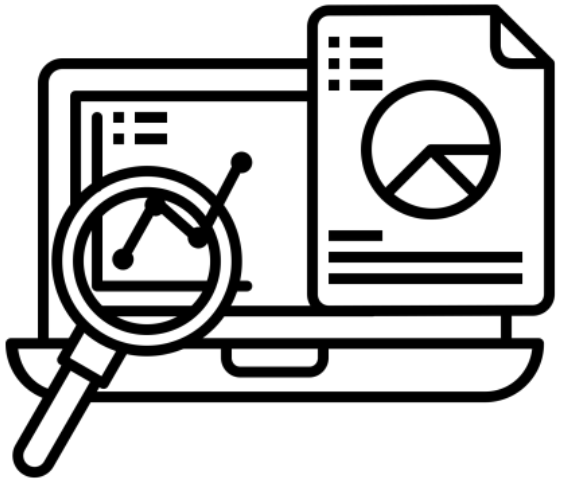
Demand for Data

- Increases in demand for data has changed the scope of our work
  - Survey research demand remains high
  - Large increase in need for university-wide dashboards and on-demand data
  - New clients in financial-related divisions
- Requests for information often last-minute and urgent



Data Requests

- No formal data request system – requests usually come in via e-mail, both to the Director and to individual staff
- Have a rotating Data Request List to distribute requests
- Around 150 ad-hoc data requests logged each year
- Additional 5-10 large “data projects” also done each year



The Old Approach

- Once project is assigned to a staff member, timeframe is dependent on client's needs and staff member's workload
- Staff members' experience levels vary
- Documentation inconsistent across projects
- Multiple copies/versions of data sources being made
- Duplication of efforts high within the office

A New Approach

- Reviewed historical project data
  - Many internal requests asking for similar data
  - Identified most-frequently requested metrics

- OIR needed to be proactive; reactive wasn't working

Tableau

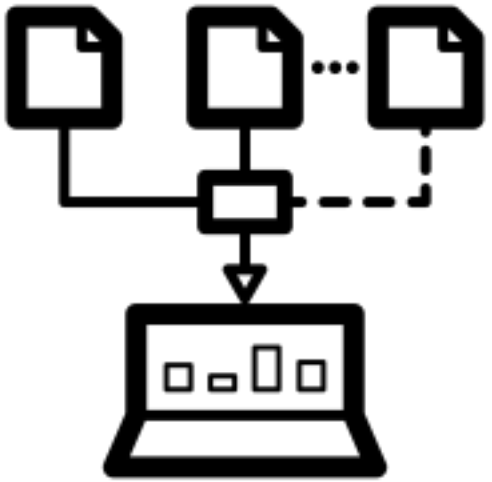
- Interactive data visualization tool
- Capacity to create dynamic, user-friendly reports

- With the Tufts Tableau Server, end-users can access dashboards securely through a web browser
- Use of Tableau rapidly expanding across the university so familiarity with the software is increasing

Data Sources

- In order to proactively respond to data requests, we needed easily accessible, universal data sources

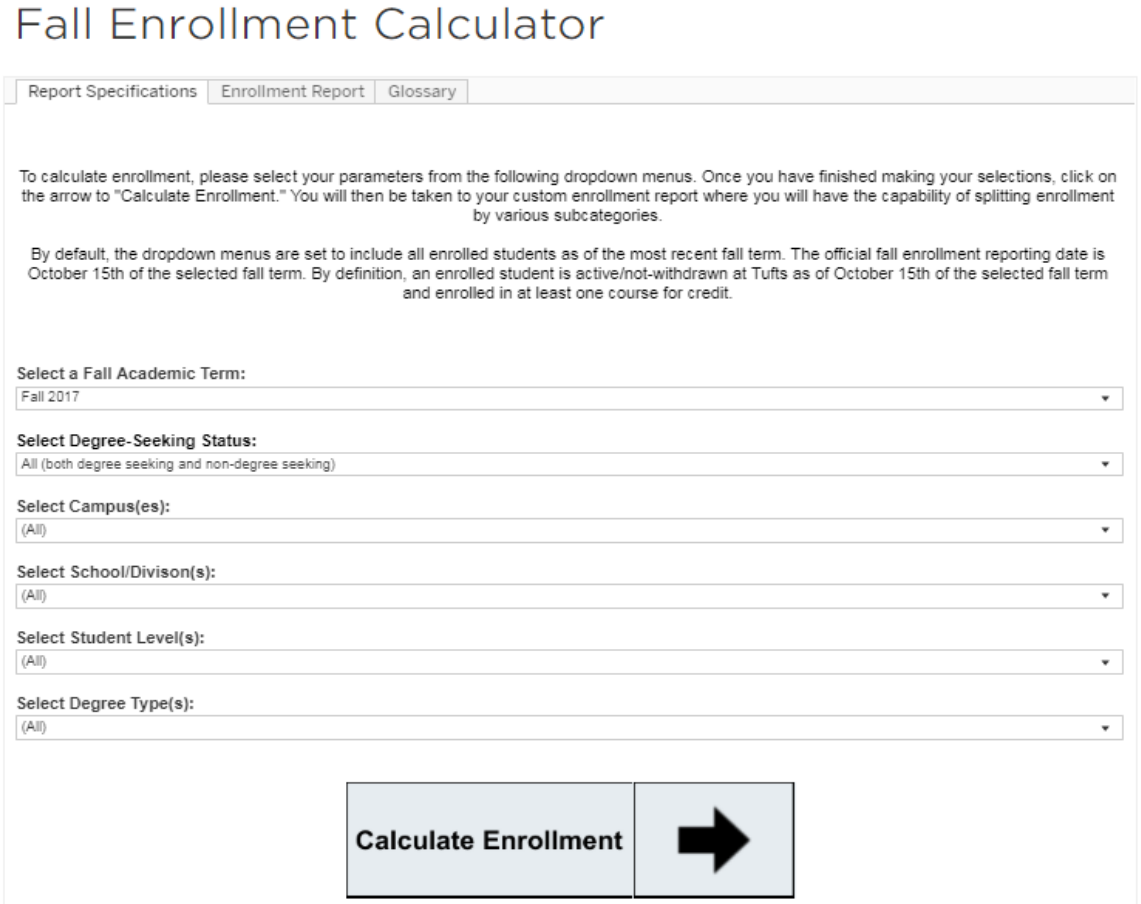
- Tableau data sources are being developed with the following features:
  - Built-in calculations
  - Clean data
  - Daily refreshes
  - Easy to understand variable names
  - Data dictionary



Dashboard Design

- Critical that self-service tools be easy to use
- Consistent “look and feel” across dashboards
- Footnotes and other data notes available for all reports
- Reports are designed to be printed or saved as PDF versions if needed

Fall Enrollment Calculator



https://provost.tufts.edu/institutionalresearch/enrollment/

Report Specifications | Enrollment Report | Glossary

Tufts

Office of Institutional Research & Evaluation

Fall 2017 Enrollment Report

Go Back to Report Filters

Select a primary grouping category (optional):

No Grouping

Select a second grouping category (optional):

No Grouping

Select a third grouping category (optional):

No Grouping

	Full-Time	Part-Time	Total Headcount
Fall 2017	10,598	851	11,449
Grand Total	10,598	851	11,449

An enrolled student is active/not-withdrawn at Tufts as of October 15th of the selected fall term and enrolled in at least one course for credit. Students studying abroad in a non-Tufts program are not included in this report.

Report Filters:
Term: Fall 2017

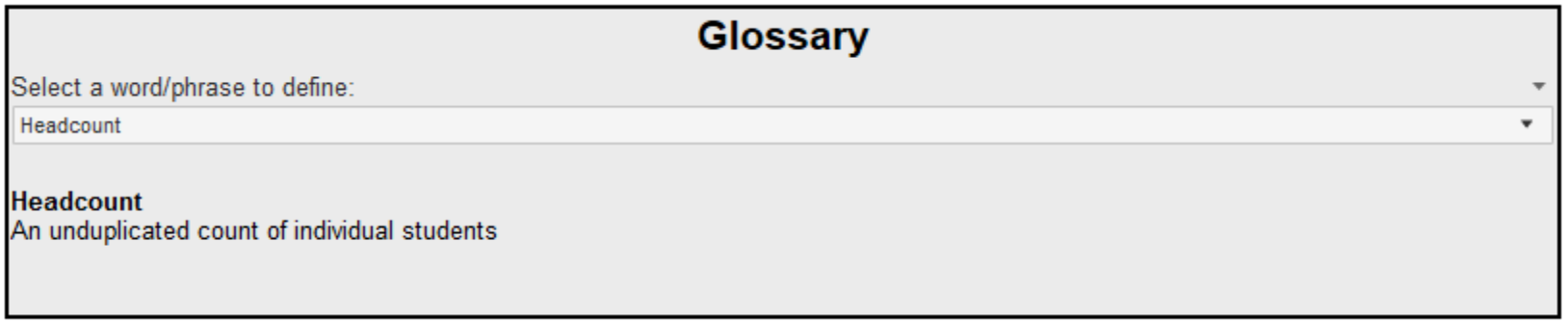
Degree-seeking Status: All (both degree seeking and non-degree seeking)

School(s) Included: Arts & Sciences - Liberal Arts, Arts & Sciences - Grad, Arts & Sciences - SMFA, School of Engineering - Undergrad, School of Engineering - Grad, Cummings School of Veterinary Medicine, Fletcher, Friedman, Sackler, School of Dental Medicine, School of Medicine (MD students), School of Medicine (PHPD students), College of Special Studies

Student Level (s) Included: Undergraduate, Graduate

Degree Type(s) Included: Bachelors, Masters, Doctorate-Research (PhD), Doctorate-Professional (DVM, DMD, MD), Doctorate-Other (OTD, DrPH), Certificate, Post-Baccalaureate, Non-Degree

Data Dictionary



Real-Time Enrollment Report

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Office of Institutional Research and Evaluation

AS&E Undergraduate Enrollment (Fall 2018)

refreshed from the Tufts data warehouse on 7/31/2018 4:00:47 AM

Undergraduate or Graduate Enrollment?

AS&E Undergraduate Enrollment

Select a Term:

Fall 2018

		First Time and Continuing Students			Enrolled students entering as transfers in Fall 2018		Grand Total
		On Campus		Tufts Study Abroad	On Campus		
		Full-Time	Part-Time	Full-Time	Full-Time	Part-Time	
A&S	Freshman	7	17		2		26
	Sophomore	1,030	64		18	1	1,113
	Junior	840	101	83	5	4	1,033
	Senior	937	96	8			1,041
	5th Year	5	4				9
	Total	2,819	282	91	25	5	3,222

Program Review Dashboards

Office of Institutional
Research and Evaluation

Program Review Dashboards
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Enrollment Reports

Enrollment Data
This dashboard includes a table of student headcounts by term. Headcount is broken down by full-time or part-time status. The table can be filtered by department/program, term, and academic plans. The table can be further broken down by various sub-categories.

GO TO REPORT

Enrollment Trends
This dashboard shows trends in student headcounts over time. The dashboard can be filtered by department/program, term, and academic plans and can be further broken down by various sub-categories.

GO TO REPORT

Enrollment Comparison
This dashboard shows trends in student headcounts over time broken down by all AS&E Majors. Majors from the selected department/program will be highlighted in red.

GO TO REPORT

Select department/program:	Select term(s):	Select academic plan(s):
	(All)	(All)

Select a primary breakout group (optional):	Select a second breakout group (optional):	Select a third breakout group (optional):
Degree Type	Student Level	No Grouping

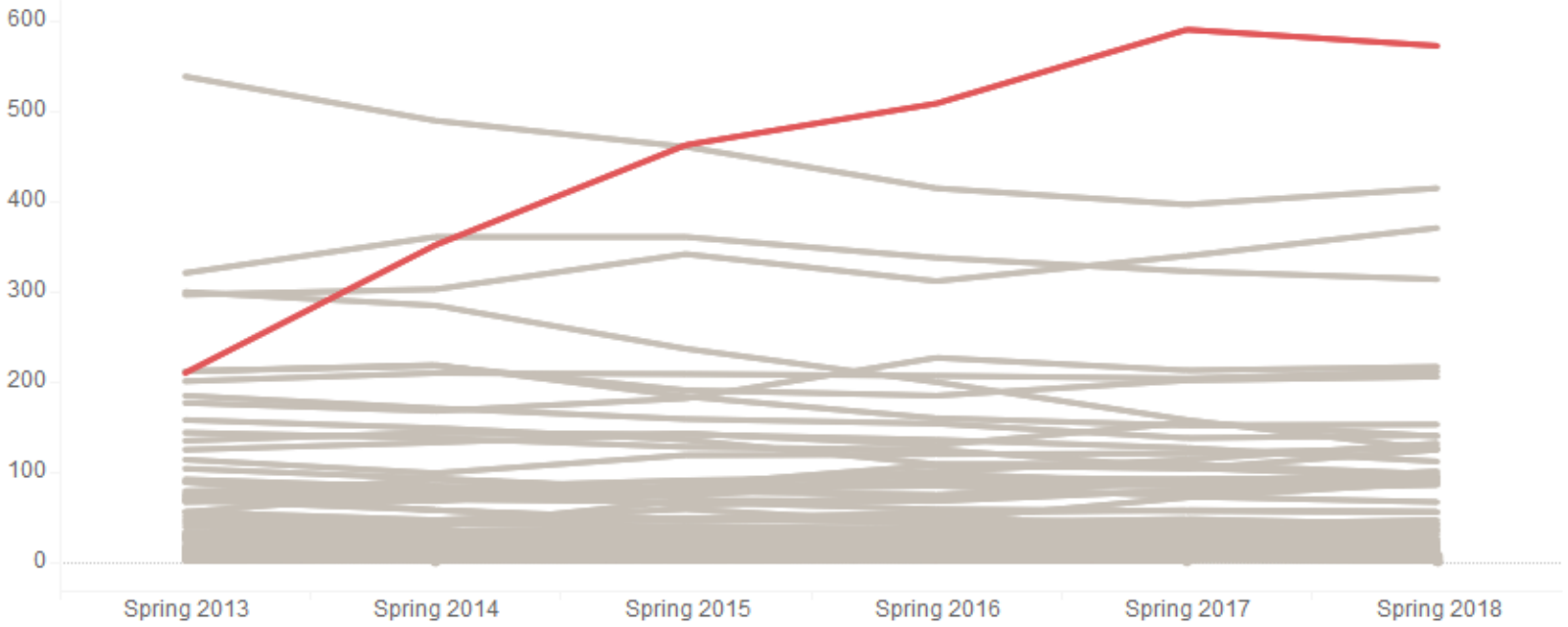
Students enrolled in an academic plan within

			Full-Time	Part-Time	Total Headcount
Spring 2013	Bachelors	Undergrad	479	6	485
	Doctorate-Research (PhD)	Graduate	35		35
	Masters	Graduate	4	9	13
Spring 2014	Bachelors	Undergrad	512	9	521
	Doctorate-Research (PhD)	Graduate	34		34
	Masters	Graduate	4	10	14
Spring 2015	Bachelors	Undergrad	536	19	555
	Doctorate-Research (PhD)	Graduate	38		38
	Masters	Graduate	7	6	13
Spring 2016	Bachelors	Undergrad	530	14	544
	Doctorate-Research (PhD)	Graduate	41	2	43
	Masters	Graduate	6	4	10
	Minor	Undergrad	2		2

Select department/program (to view details):

Select term(s): (All)

Enrollment Comparison by Undergraduate Major



	Spring 2013	Spring 2014	Spring 2015	Spring 2016	Spring 2017	Spring 2018
Total Headcount	209	351	462	508	590	572
% change from prior year		67.9%	31.6%	10.0%	16.1%	-3.1%
% change from first year	0.0%	67.9%	121.1%	143.1%	182.3%	173.7%

Unduplicated headcount of students enrolled in an AS&E undergraduate major within the listed department/programs. Includes first, second, and third majors. Enrolled students include those students who are active in their program, not withdrawn, and have an academic load greater than no units. Students studying in non-Tufts Study Abroad programs are excluded from the enrollment counts.

Admissions Dashboard

Tufts

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Slate Graduate Admissions Dashboards
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Historical Admissions Trends
This dashboard displays historical admissions trends by school. Only data from completed admissions rounds are displayed. The view can be filtered by degree type and academic plan. Users can select from five admissions metrics: total applications, total accepted applications, total enrolling applicants, admit rate, and yield.

GO TO REPORT

Total Submitted Applications
The top view in this dashboard displays compares the running total of submitted Slate applications for the current academic year to the prior academic year. A year covers the time period between September 1 and August 31. The total applications is based on the date the application was submitted in Slate. The view can be filtered by degree type, academic plan and application status.

The bottom view in this dashboard displays a break down of total submitted applications by month. Selecting a month in the top line chart will filter this view to a specific month. The data can be further broken down by academic plan, degree type, and admissions round.

GO TO REPORT

Total Applications by Admissions Round
This dashboard displays the total applications to-date, by admissions round. The selected admissions year will be compared to the prior admissions year. The view can be filtered by degree type, academic plan and admissions round. By selecting on a specific round in the view, a chart will appear at the bottom of the dashboard. This chart breaks down the application data for the specific round by academic plan.

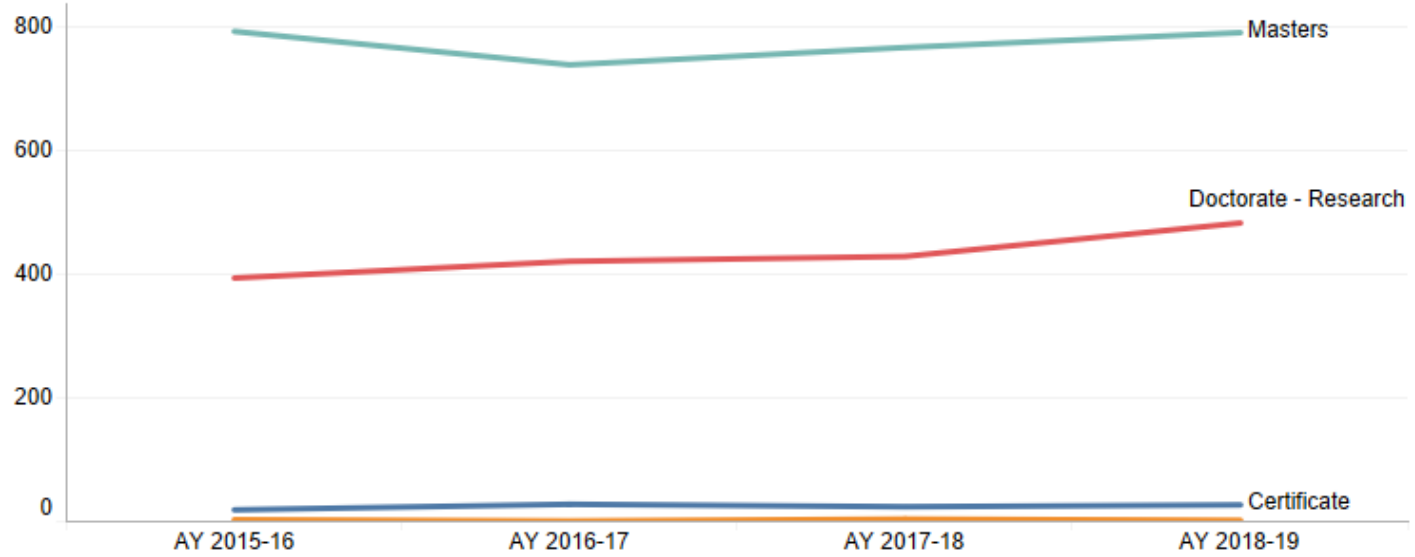
Historical Admissions Trends

Select a school:	Filter by degree type:	Filter by academic plan:
[redacted]	(All)	(All)

Select display metric:	Select a breakout group:	View by term or academic year:
Applications (#)	Degree type	Group by Academic Year

[redacted] Applications (#) by Degree type

Refreshed from data warehouse on 10/27/2018 5:19:28 AM



For internal use only. This chart shows the Applications (#) for [redacted] Numbers in this report may differ from official/published admissions statistics and may not reflect [redacted]'s total admissions information. Only applications with a status of "Decided" and a valid decision code in Slate are included. See "Notes" page for additional school-specific exclusions.

Admissions offices may use this form to provide additional context for their data:

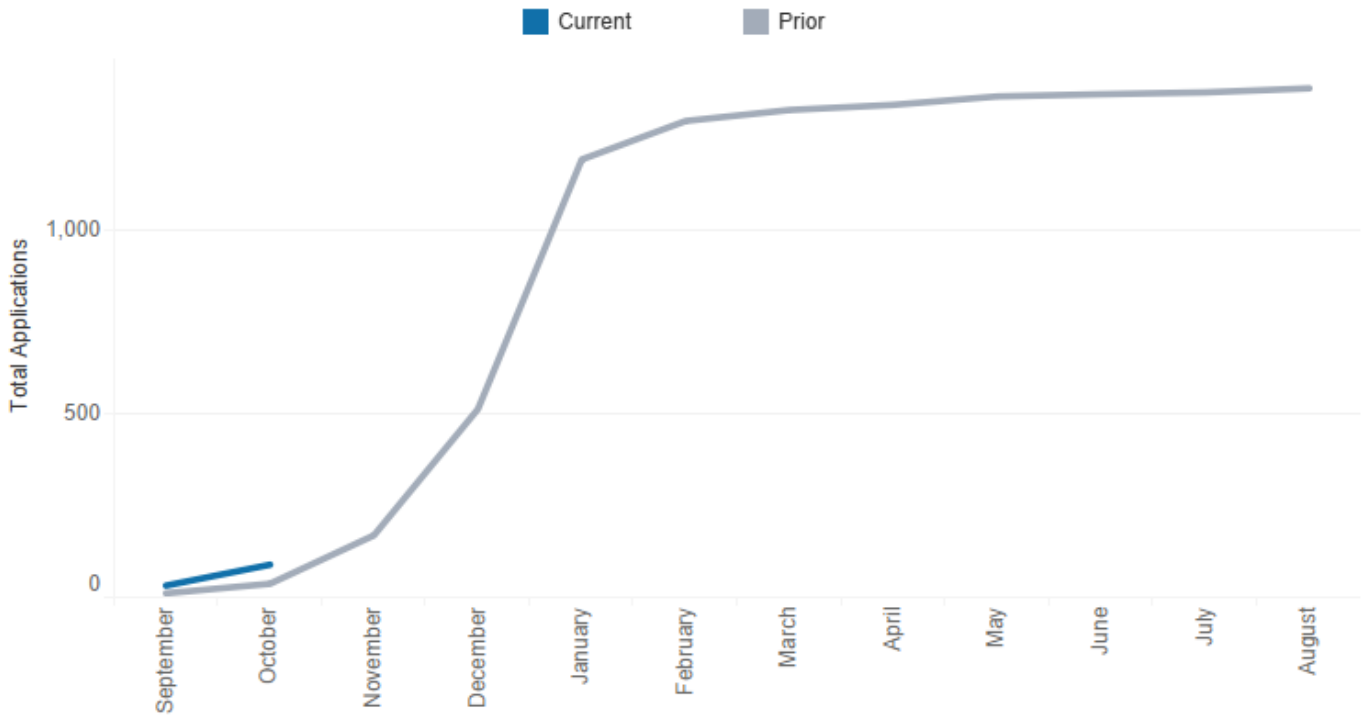
[redacted] Running Total of Submitted Applications*

Current Academic Year vs. Prior Academic Year

Refreshed from data warehouse on 10/27/2018 5:19:28 AM

Select a school:	Filter by application status:
[redacted]	(All)

Filter by degree type:	Filter by academic plan:
(All)	(All)



*This chart compares the running total of Slate applications for the current academic year to the prior academic year. A year covers the time period between September 1 and August 31. Applications with a status of "awaiting submission" have been excluded. The total applications is based on the date the application was **submitted** in Slate. See "Notes" page for additional school-specific exclusions.

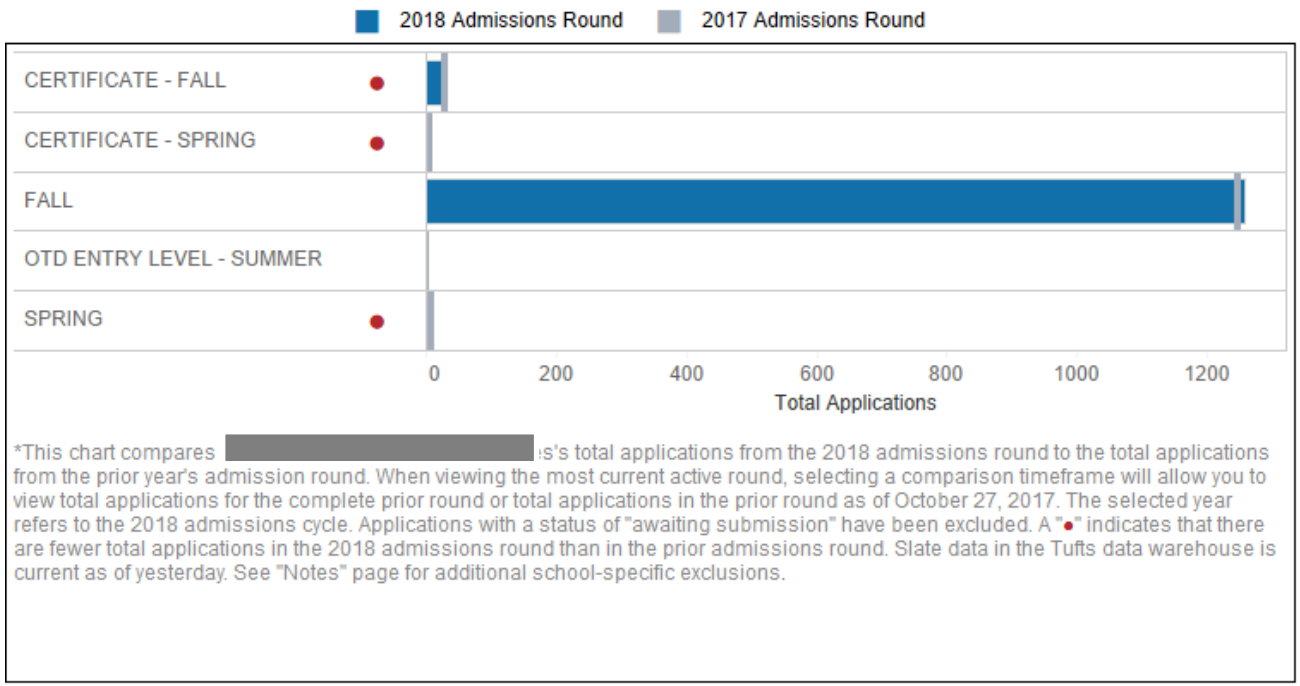
[redacted] Total Applications by Admissions Round*

2018 Admissions Round vs 2017 Admissions Round

Refreshed from data warehouse on 10/27/2018 5:19:28 AM

Select a school:	Select an admissions year:	Select a comparison timeframe:
[redacted]	2018	Total apps from complete prior admissions ...

Filter by degree type:	Filter by academic plan:	Filter by admissions round:
(All)	(All)	(All)



*This chart compares [redacted]'s total applications from the 2018 admissions round to the total applications from the prior year's admission round. When viewing the most current active round, selecting a comparison timeframe will allow you to view total applications for the complete prior round or total applications in the prior round as of October 27, 2017. The selected year refers to the 2018 admissions cycle. Applications with a status of "awaiting submission" have been excluded. A "●" indicates that there are fewer total applications in the 2018 admissions round than in the prior admissions round. Slate data in the Tufts data warehouse is current as of yesterday. See "Notes" page for additional school-specific exclusions.

Selecting a bar on the above chart will provide additional details below about the round selected.

Admissions offices may use this form to provide additional context for their data:

Reception

- “This is so awesome”
- “…it is incredibly helpful and intuitive”
- “This is really amazing and is going to transform the way we work. I really look forward to playing with it!”
- “You have no idea how much access to these dashboards will free up time for all of us.”
- “It's going to be so helpful to us- we have been trying to track this information without a formal system in place. [Our administrator] has been doing lots of manual counts!”

Future Projects

- Expanding/improving existing reports
  - University-wide real-time enrollment reporting
  - Incorporating additional data sources into Admissions Dashboard
  - Adding more survey data into Program Review Dashboard
  - Connecting to new faculty information system for Deans' Data Hubs
- External completions reporting tool
- Integrated enrollment/finance reporting mechanism in collaboration with the newly formed Enrollment Council
- Modernizing Fact Book