

Louisiana State University
Office of Budget and Planning

Using Tableau Dashboards to Maximize our Impact

Louisiana Association for Institutional Research

July 17, 2019

Bernie Braun

Kristy Neal

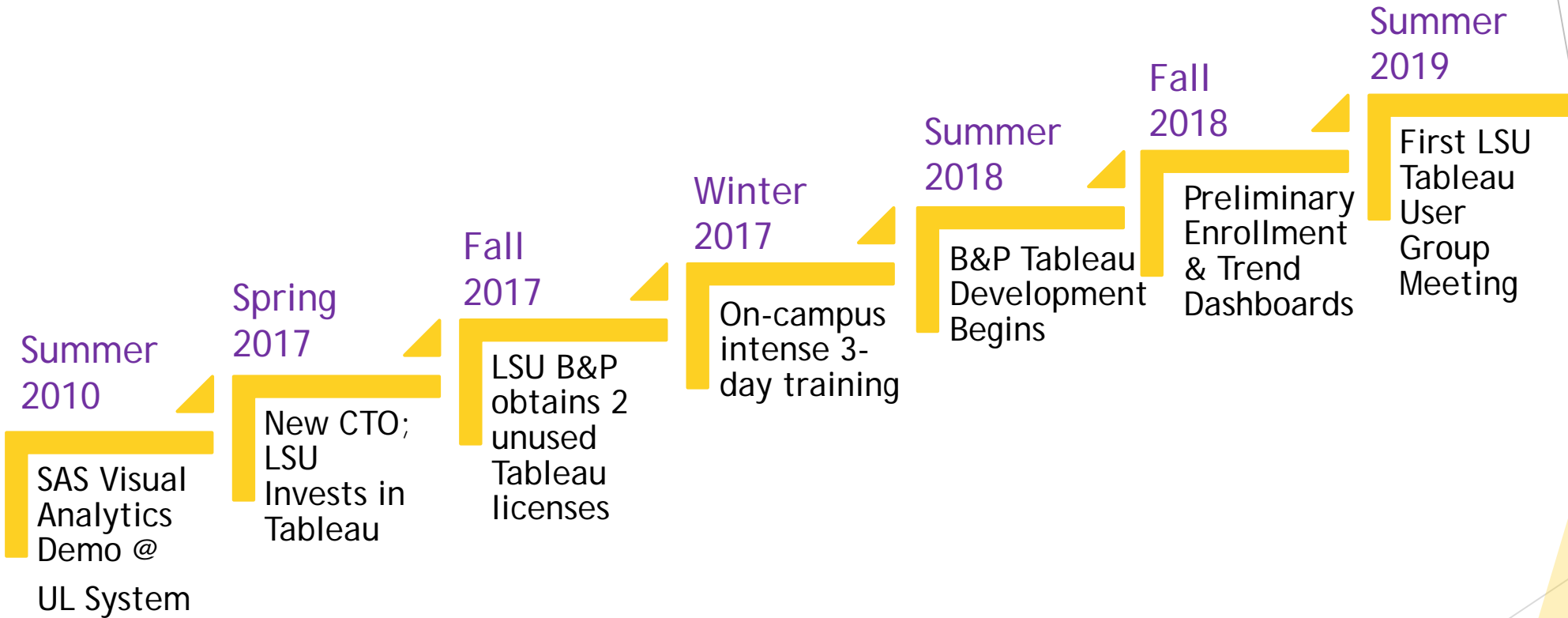
Taylor Simon

Agenda:

- ▶ History of Tableau at LSU
- ▶ Institutional Research's First Tableau Projects/Dashboards
- ▶ Dashboard Demonstration
- ▶ Challenges/Limitations/Lessons Learned
- ▶ Future Plans

Tableau @ LSU

Timeline:



Daily Enrollment Comparison

Then:

FALL 2018 ENROLLMENT

07:34 Monday, August 20, 2018 1

The FREQ Procedure

REGISTRATION_DATE

REGISTRATION_DATE	Frequency	Percent	Cumulative Frequency	Cumulative Percent
10AUG2018	544	2.03	544	2.03
13AUG2018	9	0.03	553	2.06
14AUG2018	5	0.02	558	2.08
15AUG2018	4	0.01	562	2.09
16AUG2018	2	0.01	564	2.10
17AUG2018	1	0.00	565	2.11
18AUG2018	26171	97.54	26736	99.65

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FALL 2018 DEGREE-SEEKING UNDERGRADUATES BY ENROLLMENT STATUS

The FREQ Procedure

STATUS	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Continuing	15569	70.85	15569	70.85
New Freshmen	5560	25.30	21129	96.15
New Transfer	554	2.52	21683	98.67
Re-entry	292	1.33	21975	100.00

LOUISIANA STATE UNIVERSITY																				
PRELIMINARY ENROLLMENT - DAILY UPDATES																				
FALL 2017 vs. FALL 2016																				
Headcount Enrollment					Dual Enrolled High School Students				Undergraduate Enrollment (Excluding Dual Enroll)				Graduate Enrollment				Professional Enrollment			
Change					Change				Change				Change				Change			
Date	Fall 2017	Fall 2016	Number	Percent	Fall 2017	Fall 2016	Number	Percent	Fall 2017	Fall 2016	Number	Percent	Fall 2017	Fall 2016	Number	Percent	Fall 2017	Fall 2016	Number	Percent
Day 1	25,842	25,548	294	1.15%	4	5	(1)	-20.00%	21,678				3,215	2,485	730	29.38%	945			
Day 2	26,296	26,037	259	0.99%	4	5	(1)	-20.00%	22,035				3,310	2,637	673	25.52%	947			
Day 3	26,954	26,379	575	2.18%	416	5	411	8220.00%	22,223				3,367	2,750	617	22.44%	948			
Day 4	27,179	26,672	507	1.90%	416	5	411	8220.00%	22,404				3,410	2,833	577	20.37%	949			
Day 5	27,533	26,921	612	2.27%	624	5	619	12380.00%	22,502	23,038	(536)	-2.33%	3,457	2,896	561	19.37%	950	982	(32)	-3.26%
Day 6	27,943	27,193	750	2.76%	866	5	861	17220.00%	22,605	23,214	(609)	-2.62%	3,522	2,991	531	17.75%	950	983	(33)	-3.36%
Day 7	28,080	27,533	547	1.99%	884	5	879	17580.00%	22,679	23,404	(725)	-3.10%	3,567	3,140	427	13.60%	950	984	(34)	-3.46%
Day 8	28,624	27,819	805	2.89%	1,183	5	1,178	23560.00%	22,876	23,585	(709)	-3.01%	3,615	3,244	371	11.44%	950	985	(35)	-3.55%
Day 9	28,729	28,115	614	2.18%	1,180	5	1,175	23500.00%	22,956	23,792	(836)	-3.51%	3,642	3,333	309	9.27%	951	985	(34)	-3.45%
Day 10	28,855	28,209	646	2.29%	1,181	5	1,176	23520.00%	23,037	23,851	(814)	-3.41%	3,684	3,367	317	9.41%	953	986	(33)	-3.35%
Day 11	29,212	28,411	801	2.82%	1,481	37	1,444	3902.70%	23,078	23,941	(863)	-3.60%	3,699	3,447	252	7.31%	954	986	(32)	-3.25%
Day 12	29,671	29,171	500	1.71%	1,839	542	1,297	239.30%	23,137	24,057	(920)	-3.82%	3,740	3,585	155	4.32%	955	987	(32)	-3.24%
Day 13	29,791	29,443	348	1.18%	1,842	648	1,194	184.26%	23,224	24,159	(935)	-3.87%	3,770	3,651	119	3.26%	955	985	(30)	-3.05%
Day 14	29,931	30,391	(460)	-1.51%	1,838	1,286	552	42.92%	23,341	24,364	(1,023)	-4.20%	3,797	3,755	42	1.12%	955	986	(31)	-3.14%
Final		30,850				1,401				24,626				3,840					983	

Degree-Seeking New Freshmen: Fall & Continuing Summer																
Total				Resident				Nonresident				Undetermined				
Change				Change				Change				Change				
Date	Fall 2017	Fall 2016	Number	Percent	Fall 2017	Fall 2016	Number	Percent	Fall 2017	Fall 2016	Number	Percent	Fall 2017	Fall 2016	Number	Percent
Day 1	4,630	4,975	(345)	-6.93%	3,868	4,144	(276)	-6.66%	753	821	(68)	-8.28%	9	10	(1)	-10.00%
Day 2	4,698	5,055	(357)	-7.06%	3,919	4,196	(277)	-6.60%	769	849	(80)	-9.42%	10	10	-	0.00%
Day 3	4,737	5,114	(377)	-7.37%	3,947	4,237	(290)	-6.84%	780	867	(87)	-10.03%	10	10	-	0.00%
Day 4	4,763	5,170	(407)	-7.87%	3,967	4,276	(309)	-7.23%	785	884	(99)	-11.20%	11	10	1	10.00%
Day 5	4,776	5,211	(435)	-8.35%	3,975	4,304	(329)	-7.64%	790	896	(106)	-11.83%	11	11	-	0.00%
Day 6	4,799	5,243	(444)	-8.47%	3,994	4,327	(333)	-7.70%	793	905	(112)	-12.38%	12	11	1	9.09%
Day 7	4,814	5,278	(464)	-8.79%	4,004	4,354	(350)	-8.04%	798	913	(115)	-12.60%	12	11	1	9.09%
Day 8	4,835	5,306	(471)	-8.88%	4,020	4,376	(356)	-8.14%	803	920	(117)	-12.72%	12	10	2	20.00%
Day 9	4,849	5,319	(470)	-8.84%	4,028	4,386	(358)	-8.16%	809	922	(113)	-12.26%	12	11	1	9.09%
Day 10	4,866	5,333	(467)	-8.94%	4,033	4,395	(362)	-8.24%	811	927	(116)	-12.51%	12	11	1	9.09%
Day 11	4,859	5,351	(492)	-9.19%	4,035	4,410	(375)	-8.50%	809	930	(121)	-13.01%	15	11	4	36.36%
Day 12	4,871	5,376	(505)	-9.39%	4,045	4,433	(388)	-8.75%	812	932	(120)	-12.88%	14	11	3	27.27%
Day 13	4,891	5,403	(512)	-9.48%	4,061	4,452	(391)	-8.78%	815	940	(125)	-13.30%	15	11	4	36.36%
Day 14	4,902	5,451	(549)	-10.07%	4,067	4,493	(426)	-9.48%	819	947	(128)	-13.52%	16	11	5	45.45%
Final		5,475				4,522				953				-		

Note: Enrollment counts do not include LSU Online.
 "Day" refers to the class day associated with LSU main campus academic calendar.
 Fall 2017 Day 8 moved from August 30 to August 31 due to University closure for Tropical Storm Harvey.

Daily Enrollment Comparison

Now:

Reply Reply All Forward



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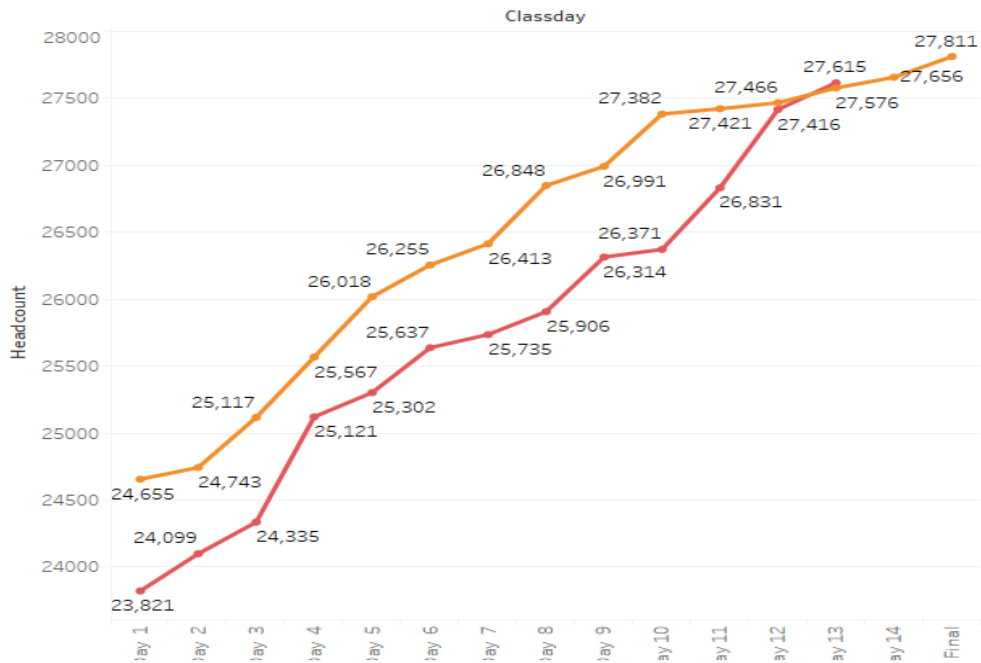
no-reply@lsu.edu

Daily Enrollment Comparison

To: Kristy R. Neal

Daily Enrollment Comparisons

Louisiana State University
Daily Enrollment by Level



Daily Enrollment Comparison

Process Improvements:

	Legacy	Tableau
Efficiency	Daily multiple manual steps to complete process	Almost hands-off
Presentation	Flat Excel table	Interactive charts/graphs
Delivery	Information sent as attachment	Dashboard visuals included in body of email

LSU Trend Data - Demographic

Then:



LOUISIANA STATE UNIVERSITY

Trend Data: Students, Enrollment and Student Attributes

Total Enrollment by Gender and Racial/Ethnic Category Fall Semesters

	Asian or Pacific Islander		Black, Non-Hispanic		Non-resident Alien		Hispanic		American Indian or Alaskan Native		Native Hawaiian or Pacific Islander		White, Non-Hispanic		Two or More Races		Race/Ethnicity Unknown		Grand Total	
	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W
	2017	616	603	1,409	2,363	1,037	604	893	984	36	69	18	17	10,142	11,108	236	323	205	200	14,592
2016	654	557	1,375	2,366	1,060	629	861	959	38	60	14	15	10,526	11,434	243	366	117	140	14,888	16,526
2015****	647	567	1,398	2,305	1,058	646	855	912	42	55	20	15	10,703	11,423	265	398	109	109	15,097	16,430
2014	560	514	1,333	2,082	1,005	616	768	839	39	41	17	12	10,639	11,108	274	409	99	96	14,734	15,717
2013***	493	457	1,213	2,015	1,030	563	648	757	50	46	14	14	10,642	11,080	256	369	110	108	14,456	15,409
2012	458	437	1,180	1,874	1,027	578	606	699	54	34	9	9	10,636	11,099	231	299	173	146	14,374	15,175
2011	432	408	1,120	1,715	1,023	578	511	638	66	39	4	10	10,538	11,030	187	212	249	225	14,130	14,855
2010	447	462	1,027	1,594	1,048	584	465	581	70	48	2	4	10,523	10,963	138	145	334	336	14,054	14,717
2009**	426	446	948	1,506	1,016	608	408	490	64	59	1	1	10,309	10,653	99	64	453	441	13,724	14,268
2008	419	452	920	1,583	932	579	391	435	58	67	----	----	10,485	10,958	----	----	468	447	13,673	14,521
2007	396	416	916	1,566	905	563	380	407	64	58	----	----	10,423	11,128	----	----	414	383	13,498	14,521
2006	396	412	977	1,667	947	569	378	398	66	55	----	----	10,778	11,833	----	----	434	407	13,976	15,341
2005*	407	408	1,001	1,712	1,045	620	364	409	65	62	----	----	11,260	12,297	----	----	480	434	14,622	15,942
2004	420	404	1,061	1,757	1,140	675	355	384	60	56	----	----	11,549	12,765	----	----	481	454	15,066	16,495
2003	427	432	1,049	1,864	1,148	665	341	367	63	53	----	----	11,337	12,657	----	----	426	405	14,791	16,443
2002	461	472	1,078	1,957	1,139	625	354	374	53	62	----	----	11,361	12,889	----	----	380	377	14,826	16,756
2001	505	502	1,057	1,939	1,100	598	366	368	48	64	----	----	11,347	12,791	----	----	376	341	14,799	16,603
2000	528	509	1,004	1,936	1,096	584	361	358	58	52	----	----	11,141	12,556	----	----	372	315	14,560	16,310
1999	556	511	954	1,898	1,176	599	350	362	63	62	----	----	11,194	12,566	----	----	367	319	14,660	16,317
1998	569	475	960	1,762	1,166	599	336	341	64	59	----	----	10,773	12,111	----	----	356	310	14,224	15,657
1997	531	477	880	1,574	1,162	619	340	327	52	60	----	----	10,393	11,107	----	----	311	244	13,669	14,408
1996	496	434	831	1,445	1,186	584	338	315	50	54	----	----	10,094	10,558	----	----	247	219	13,242	13,609
1995	506	408	779	1,382	1,136	549	307	279	57	51	----	----	9,830	10,233	----	----	206	174	12,821	13,076

LSU Trend Data - Demographic

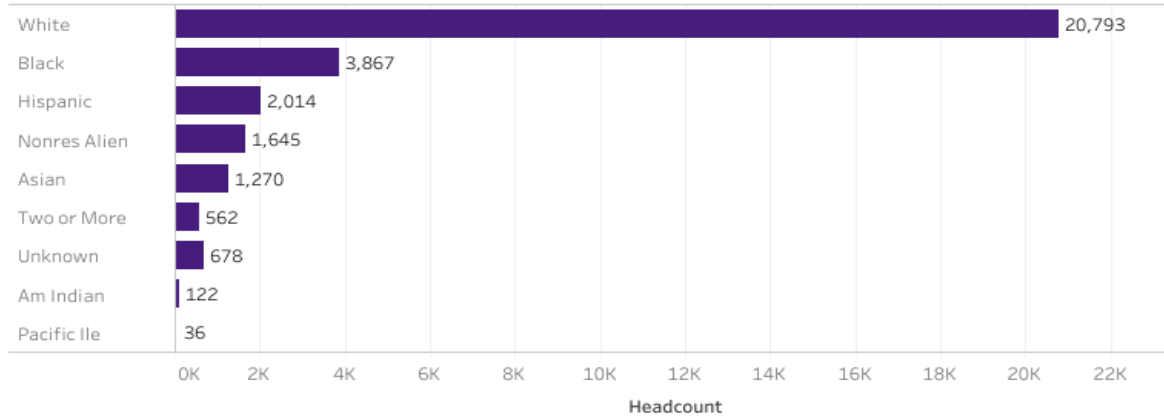
Now:



Trend Data: Fall Enrollment

Enrollment by Race/Gender/Level - Fall 2018

Click on a bar to filter the line graph below



Term
Fall 2018

Selected Race/Ethnicity

- Am Indian
- Asian
- Black
- Hispanic
- Nonres Alien
- Pacific Ile
- Two or More
- Unknown
- White

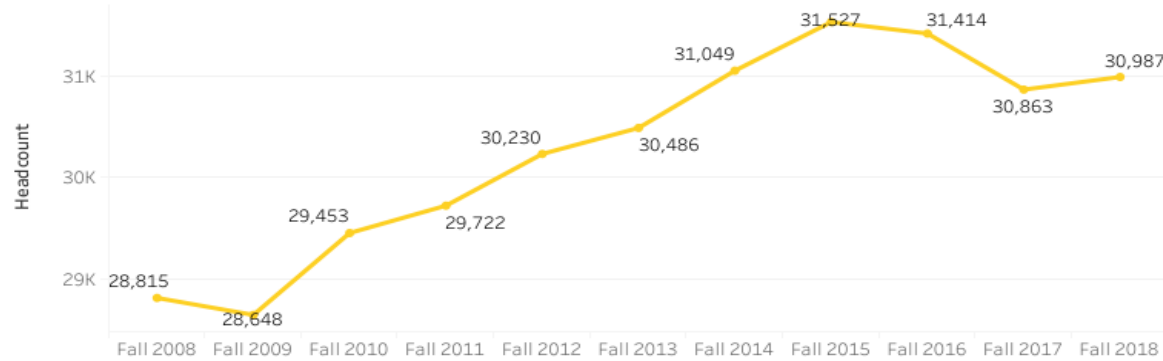
Gender

- Female
- Male

Student Level

- Graduate & Professional
- Graduate & Professional Online
- Undergraduate
- Undergraduate Online

Historical Enrollment by Race/Gender/Level - Selected Group



LSU Trend Data - Geographic

Then:



LOUISIANA STATE UNIVERSITY

Trend Data: Students, Enrollment and Student Attributes

Enrollment by Geographic Origin Fall Semesters

	<u>Louisiana</u>	<u>Other States</u>	<u>Other Nations</u>	<u>Total Enrollment</u>
2017	23,637	5,585	1,641	30,863
2016	24,100	5,625	1,689	31,414
2015****	24,021	5,802	1,704	31,527
2014	23,005	5,825	1,621	30,451
2013***	22,328	5,944	1,593	29,865
2012	21,860	6,084	1,605	29,549
2011	21,402	5,982	1,601	28,985
2010	21,431	5,708	1,632	28,771
2009	21,393	4,975	1,624	27,992
2008	22,030	4,653	1,511	28,194
2007	22,356	4,195	1,468	28,019

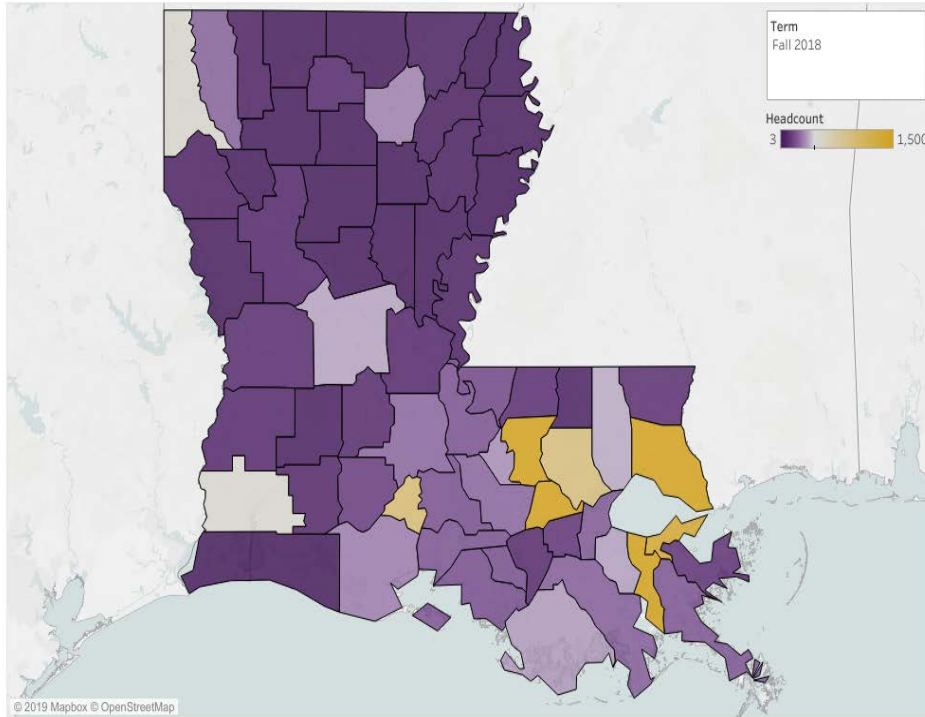
LSU Trend Data - Geographic

Now:



Trend Data: Fall Enrollment

In-State Enrollment by Parish - Fall 2018



Trend Data: Fall Enrollment

Out-Of-State Enrollment by State - Fall 2018

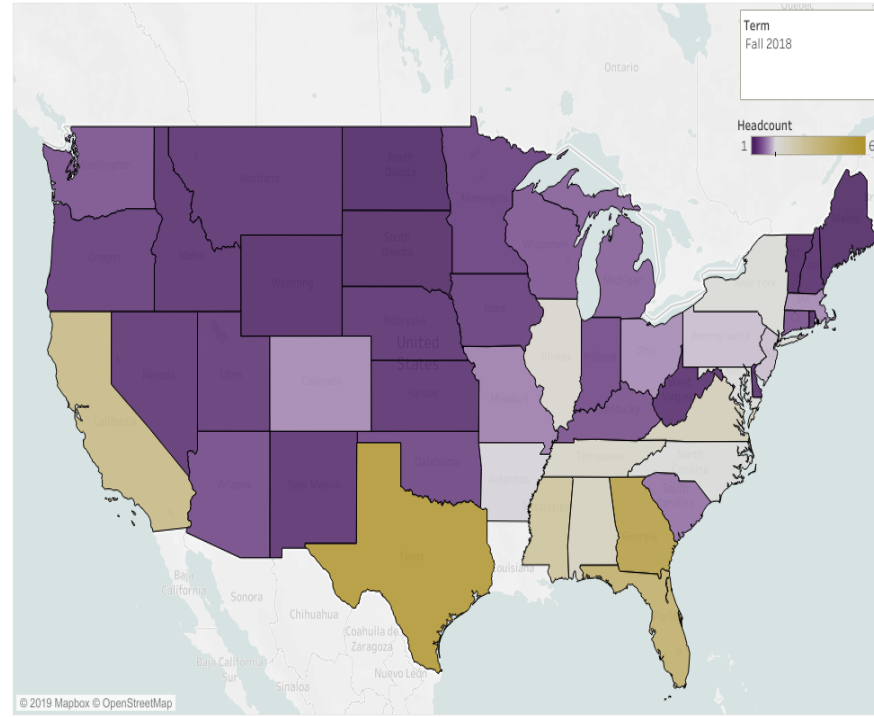


Tableau Dashboard Demonstration:

- ▶ Daily Enrollment Dashboards:
- ▶ Trend Table Dashboards:
 - ▶ <https://www.lsu.edu/bgtplan/trend/trend-data.php>
 - ▶ <https://public.tableau.com/profile/lsu.office.of.budget.planning#!/>

Tableau Lessons Learned:

- ▶ Establishing single data sources
- ▶ Data security
- ▶ 80/20 rule
- ▶ Partnership with IT is important
- ▶ Need for Tableau User Group

Tableau Challenges & Limitations:

- ▶ Challenges:
 - ▶ Nuances of Tableau
 - ▶ Daily Enrollment process setup, start, stop
 - ▶ Workarounds to surpass perceived limitations
 - ▶ Time required for dashboard development
- ▶ Limitations:
 - ▶ Inability to view enrollment dashboard outside campus network
 - ▶ Public dashboards rely on data extracts

Future Tableau Plans:

- ▶ Personnel Dashboard: Geaux Live = This Week
- ▶ Multiple Year Enrollment Comparison by Curriculum Dashboard
- ▶ Freshmen Profile Dashboard
- ▶ Grade Distribution Dashboard
- ▶ Data Extracts

Contacts:

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