

Visualizing Indian Indenture: Prototype Presentation

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Introduction

Motivation came out of personal history and interest in the system of indenture

The Indian indenture system sent 2 million Indians to work in European colonies as a substitute for slave labour between 1830s – 1920s

Between 1860 – 1911, over 150,000 indentured workers migrated from India to Natal, South Africa to provide labour for the sugar industry.

InfoSpace

Information about the migrants to Natal was captured in ship registers that are housed at the Durban Archives in South Africa

Particulars of Deceased		Number in Register	Name.	Father's Name.	Age.	Sex.	Cause.	District.	Thana.	Village or Town and Mofalla	Date of birth age, date of death	Remarks	
Date	Year												
1	Aug 1874	211	Dhagwan	Guzaram	25	m	Star	Roz Bariatty	Dalamon	Barraka	Aug 1874 5 3	Scar right thigh	
2	Aug 1874	696	Dekha	Melabik	20	f	Chamia	Phulpur	Phulpur	Sonakri	Aug 1874 4 6	Wart right chest	
3	Aug 1874	227	Ramdeur	Lewdhal	35	m	Star	Benares	Balua	Sonakela	Aug 1874 5 24	Scar back	
4	.	232	Surje	Sheo Singh	18	m	Pock (Opus)	Allahabad	Behandia	Jursathpura	Aug 1874 4 5	Pock marked face	
5	.	230	Zoria	Dhawandin	30	m	Chamer	Sultanpur	Dosepur	Baruwa	Aug 1874 5 5	Scar back	
6	July 1874	306	Dhauantal	Kautan	22	m	Bhar	"	Jaisingpur	Bisengpur	Aug 1874 5 1	Pock marked face	
7	.	320	Dilata	Larshan	25	f	Chamer	Basti	Kalwari	Chakulia	Aug 1874 4 14	Scar left wrist	
8	.	-	Hingari	Sheoraj	8	g	"	"	"	"	Aug 1874	58555 -	
9	.	-	Baddri	"	18	"	"	"	"	"	Aug 1874	58556 -	
10	.	400	353	Phrae	Basanta	36	m	Star	Izzabad	Jalalpur	Barauna	Aug 1874 5 6	Scar back
11	.	338	Kepal	Sheodin	25	m	Kurmi	Gonda	Birpur	Kakurghala	Aug 1874 5 7	Scar right shin	
12	.	341	Kalesar	Matadin	21	m	Kurmi	Kuchnow	Mohanganj	Kurserni	Aug 1874 5 14	Pock marked face	
13	.	343	Maiku	Matao	20	m	Koth	Parabanki	Hyderabad	Hydergarh	Aug 1874 5 1	Scars both shins	
14	Gonda	1874	32	Rayal	Paranti	22	m	Kurmi	Gonda	Burinager	Raijeti	Aug 1874 5 6	Scar right shin
15	July 1874	376	Moonga	Erij	24	f	Morao	"	Colonelgunj	Naryagora	Aug 1874 5 -	Scar left chest	
16	Allahabad	1874	176	Johha	Matadin	20	m	Chamer	Allahabad	Phulpur	Babuganj	Aug 1874 5 24	Scar at knee
17	Patna	1874	129	Pat	"	3	11	B	"	"	"	Aug 1874	5 -

65003	RAMNADA MUDALY	KANGOO MUDALY	25	0	M	Vellala	NORTH ARCOT	ARCOT	TIRUVOTHIYUR		Jan 1897 Umlazi IV Madras	La Mercy Estate La Mercy Verulam Sugar	
65004	THAYI	VALLIAH MUDALY	25	0	F	Vellala	NORTH ARCOT	ARCOT	TIRUVOTHIYUR		Jan 1897 Umlazi IV Madras	La Mercy Estate La Mercy Verulam Sugar	
65005	GENGEN	RAMMADA MUDALY	7	0	B	Vellala	NORTH ARCOT	ARCOT	TIRUVOTHIYUR		Jan 1897 Umlazi IV Madras	La Mercy Estate La Mercy Verulam Sugar	
65006	CHINNASAMI	MOTHAY GOUNDEN	28	0	M	Vannia	NORTH ARCOT	WANDIWASH	ALATHUR		Jan 1897 Umlazi IV Madras	Natal Estates Ltd. Mt. Edgecombe Verulam Sugar	
65007	AMMAKANNU	VENKATACHALA NAIK	22	0	F	Vannia	NORTH ARCOT	WANDIWASH	ALATHUR		Jan 1897 Umlazi IV Madras	Natal Estates Ltd. Mt. Edgecombe Verulam Sugar	
65008	CHELLAN	CHINNASAMI	3	0	G	Vannia	NORTH ARCOT	WANDIWASH	ALATHUR		Jan 1897 Umlazi IV Madras	Natal Estates Ltd. Mt. Edgecombe Verulam Sugar	
65009	GOVINDSAM	VIRAPPA MUDALY	28	0	M	Mudaly	SALEM	SALEM	SALEM		Jan 1897 Umlazi IV Madras	De Montille, Remy Cato Manor Durban Sugar	
65010	LUTCHNI	MUTHUSAMY MUDALY	20	0	F	Mudaly	SALEM	SALEM	SALEM		Jan 1897 Umlazi IV Madras	De Montille, Remy Cato Manor Durban Sugar	
65011	NAGAMMA	KISTAPPA MUDALY	24	0	F	Mudaly	SALEM	SALEM	SALEM		Jan 1897 Umlazi IV Madras	De Montille, Remy Cato Manor Durban Sugar	
65012	GAN APPALSAMI	G. RAMUDU	20	0	M	Paria	GODAVERY	PEDDAPOOR	GOVINDAPUR		Jan 1897 Umlazi IV Madras	Reynolds Brothers Umzinto Sugar	
65013	GARA BUTCHMA	KOTTADA KONDIAH	18	0	F	Paria	GODAVERY	PEDDAPOOR	GOVINDAPUR		Jan 1897 Umlazi IV Madras	Reynolds Brothers Umzinto Sugar	
65014	IMAN SAIB, K	K. MOIDAN SAIB	35	0	M	Muslim	VIZAGAPATAM	VIZAGAPATAM	VIZAGAPATAM		Jan 1897 Umlazi IV Madras	Tongaat Central Sugar Co. (E.Saunde Tongaat Sugar	[Ret_India : 29.06.1916 Umkuzi]
65015	PEERANA	K. MALLAISU	25	0	F	Muslim	VIZAGAPATAM	VIZAGAPATAM	VIZAGAPATAM		Jan 1897 Umlazi IV Madras	Tongaat Central Sugar Co. (E.Saunde Tongaat Sugar	[Ret_India : 29.10.1921 Umhloti]
65016							TAM	VIZAGAPATAM			Jan 1897 Umlazi IV Madras	Tongaat Central Sugar Co. (E.Saunde Tongaat Sugar	
65017							TAM	VIZAGAPATAM			Jan 1897 Umlazi IV Madras	Tongaat Central Sugar Co. (E.Saunde Tongaat Sugar	[Ret_India : 29.06.1916 Umkuzi]
65018							TAM	VIZAGAPATAM			Jan 1897 Umlazi IV Madras	Tongaat Central Sugar Co. (E.Saunde Tongaat Sugar	
65019								REJUM			Jan 1897 Umlazi IV Madras	Tongaat Central Sugar Co. (E.Saunde Tongaat Sugar	
65020								REJUM			Jan 1897 Umlazi IV Madras	Tongaat Central Sugar Co. (E.Saunde Tongaat Sugar	
65021							ANDRAPOR E	BALABADRAPURAM			Jan 1897 Umlazi IV Madras	Tongaat Central Sugar Co. (E.Saunde Tongaat Sugar	
65022							ANDRAPOR E	BALABADRAPURAM			Jan 1897 Umlazi IV Madras	Tongaat Central Sugar Co. (E.Saunde Tongaat Sugar	[Ret_India : 23.09.1916 Umkuzi]
65023	MUTHUSAMI PILLAI	RAMSAM PILLAI	22	0	M	Vellala	TRICHINOPOLY	TRICHINOPOLY	TRICHINOPOLY		Jan 1897 Umlazi IV Madras	Harrison, H.P. Rosehill Est, Avoca Durban Sugar	
65024	PARVATHY	VIRABADREN	18	0	F	Vellala	TRICHINOPOLY	TRICHINOPOLY	TRICHINOPOLY		Jan 1897 Umlazi IV Madras	Harrison, H.P. Rosehill Est, Avoca Durban Sugar	
65025	RENGIAH	VENKASAMI	30	0	M	Balija	NORTH ARCOT	GUDIYATUM	KATHAVALAM		Jan 1897 Umlazi IV Madras	Crookes, Samuel & Sons Renishaw Umzinto Other	
65026	MANGAI	RANNIAH	23	0	F	Balija	NORTH ARCOT	GUDIYATUM	KATHAVALAM		Jan 1897 Umlazi IV Madras	Crookes, Samuel & Sons Renishaw Umzinto Other	
												Crookes, Samuel & Sons Renishaw Umzinto	

Information from these registers was digitized and put into a number of Microsoft Excel files by an amateur historian

Problem

The information is a large dataset of over 150,000 records and is only able to be browsed in that form and is difficult to draw generalizations from the information

While the dataset contains geographic information, that information is not easily understood spatially, and it is not easy to understand where the migrants originated

Any patterns or connections between various aspects of the information, like caste and gender and geography, are not easily identifiable.

Evolution of design

We were eager to implement solutions

Having from this design and adding complexity

After design studios, we started at the beginning of the process, solving one problem at a time.

Interaction levels

Activities

- Reasoning – using information to draw inferences or conclusions about that period of history
- Knowledge discovery –discover useful knowledge like discovering patterns between migrants, finding new patterns in migrant distribution and dispersion, formulating hypothesis, finding relationships between migration and events
- Sensemaking – developing an understanding of information space and indenture
- Problem solving – ability for people of Indian origin to find determine if there are records that support their status with the Indian government (PIO status)

Tasks: Identifying, locating, categorizing

Interactions: Filtering, comparing, drilling, annotating, searching, selecting

Demo of prototype

color by gender



search for name

filter by gender



filter by age



filter by marital status



filter by caste/religion



filter by region



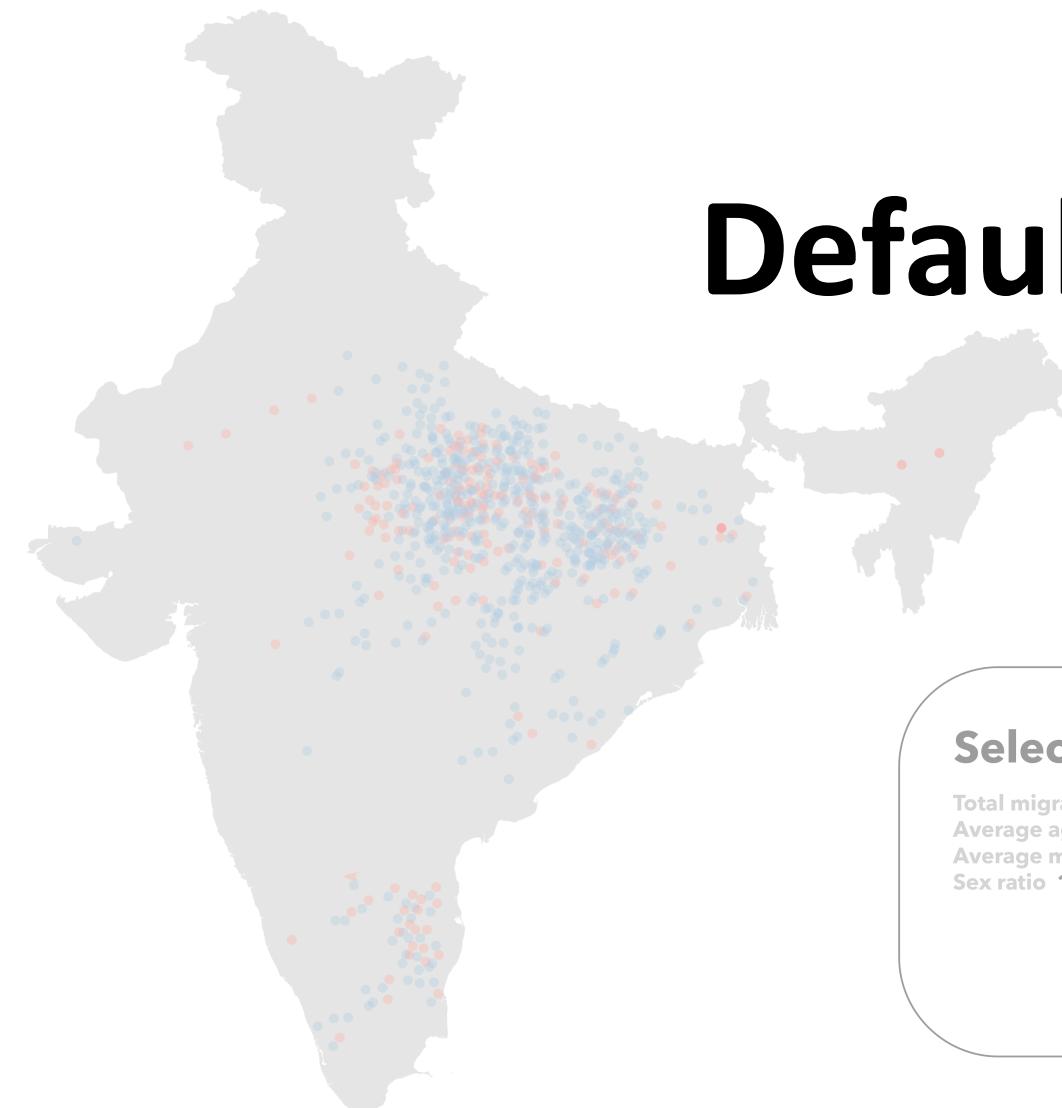
filter by port



filter by employer



Clear Filters



Default View

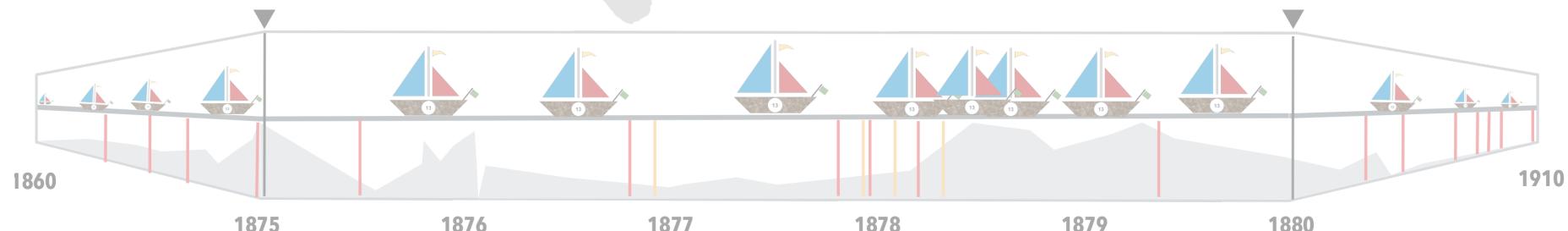
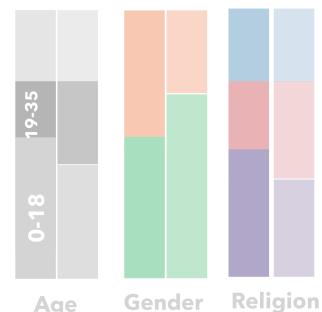
Selected

Total migrants 150023 (150023)

Average age 32.5(32.5)

Average migration year 1893 (1893)

Sex ratio 10:1.3



color by gender



search for name

filter by gender



filter by age



filter by marital status



filter by caste/religion



filter by region



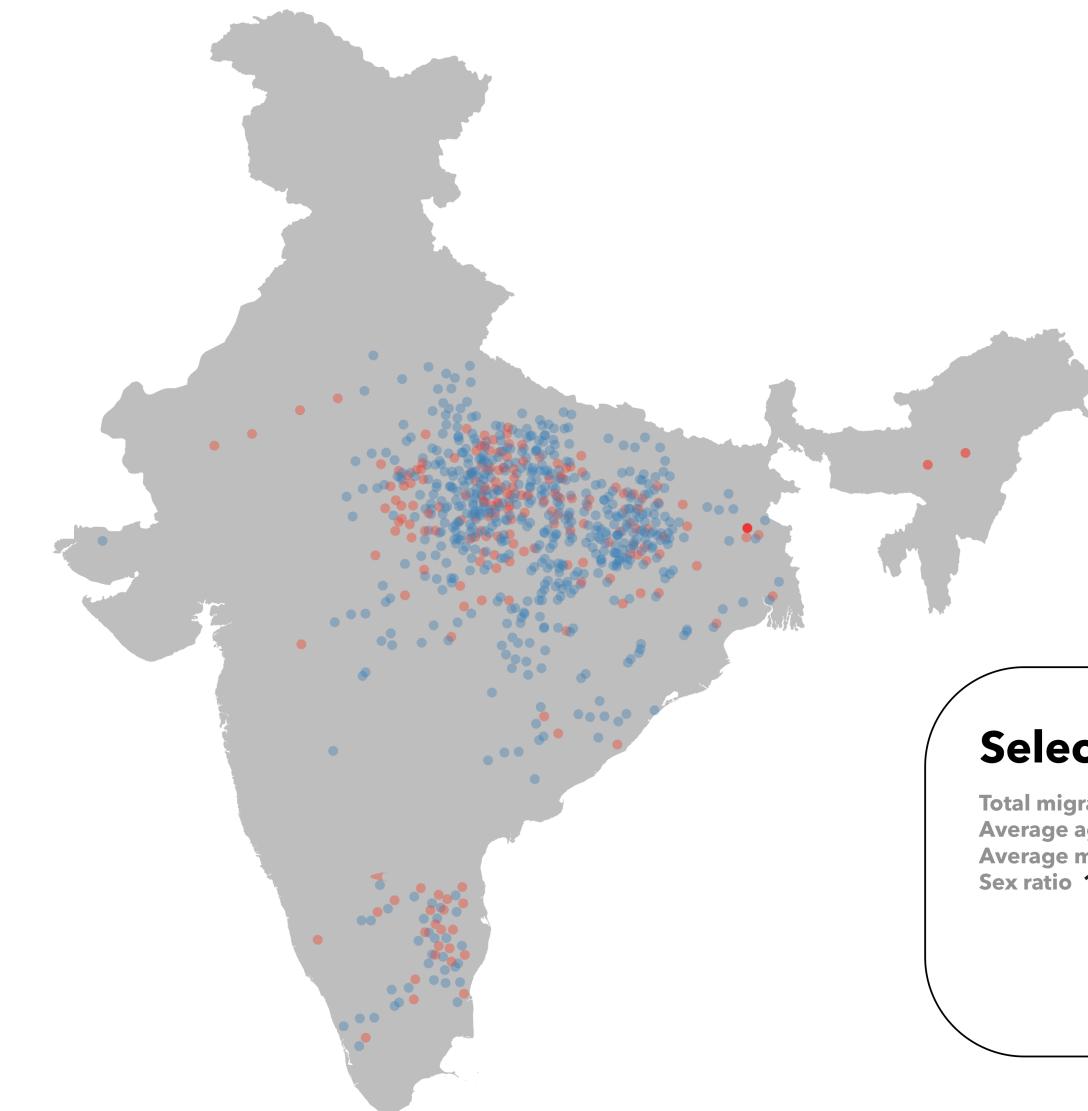
filter by port



filter by employer

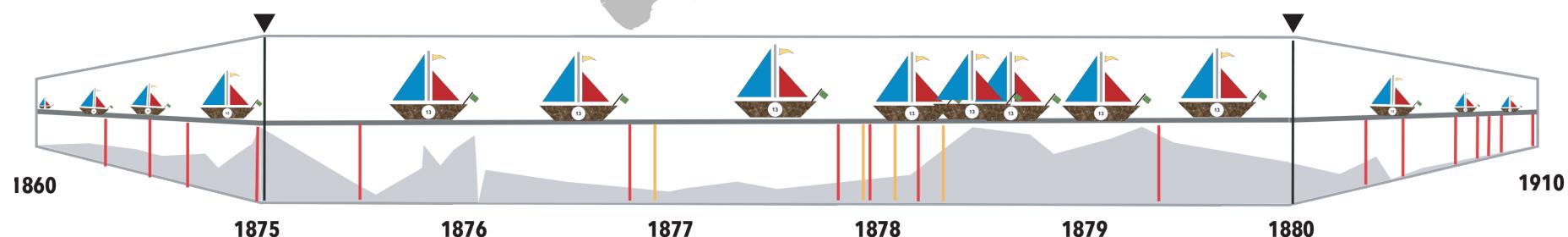
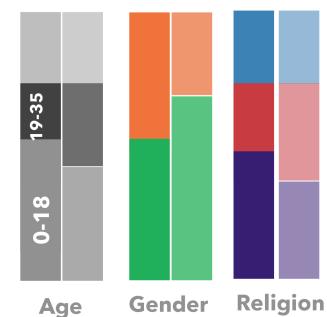


Clear Filters



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color by gender



search for name

filter by gender



filter by age



filter by marital status



filter by caste/religion



filter by region



filter by port



filter by employer



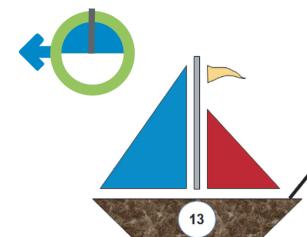
Clear Filters



Heemo

Indenture #353

Age 19
Sex M
Caste Rajput
Zilla Benares
Port Calcutta
Arrival Nov 1860
Remarks None
Relations None

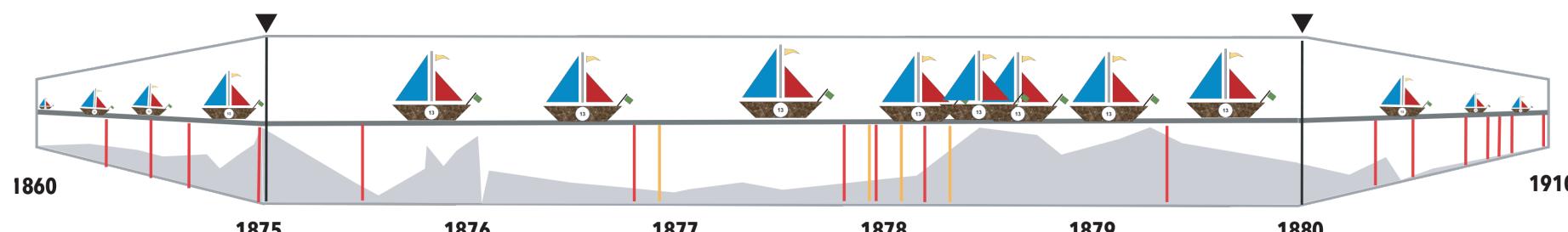
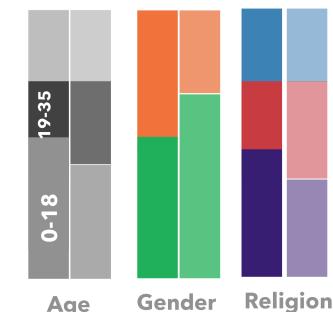


Belvedere

DECEMBER 1860

Selected

Total migrants 150023 (150023)
Average age 32.5(32.5)
Average migration year 1893 (1893)
Sex ratio 10:1.3



search for name



Filters

color by gender

filter by gender

filter by age

filter by marital status

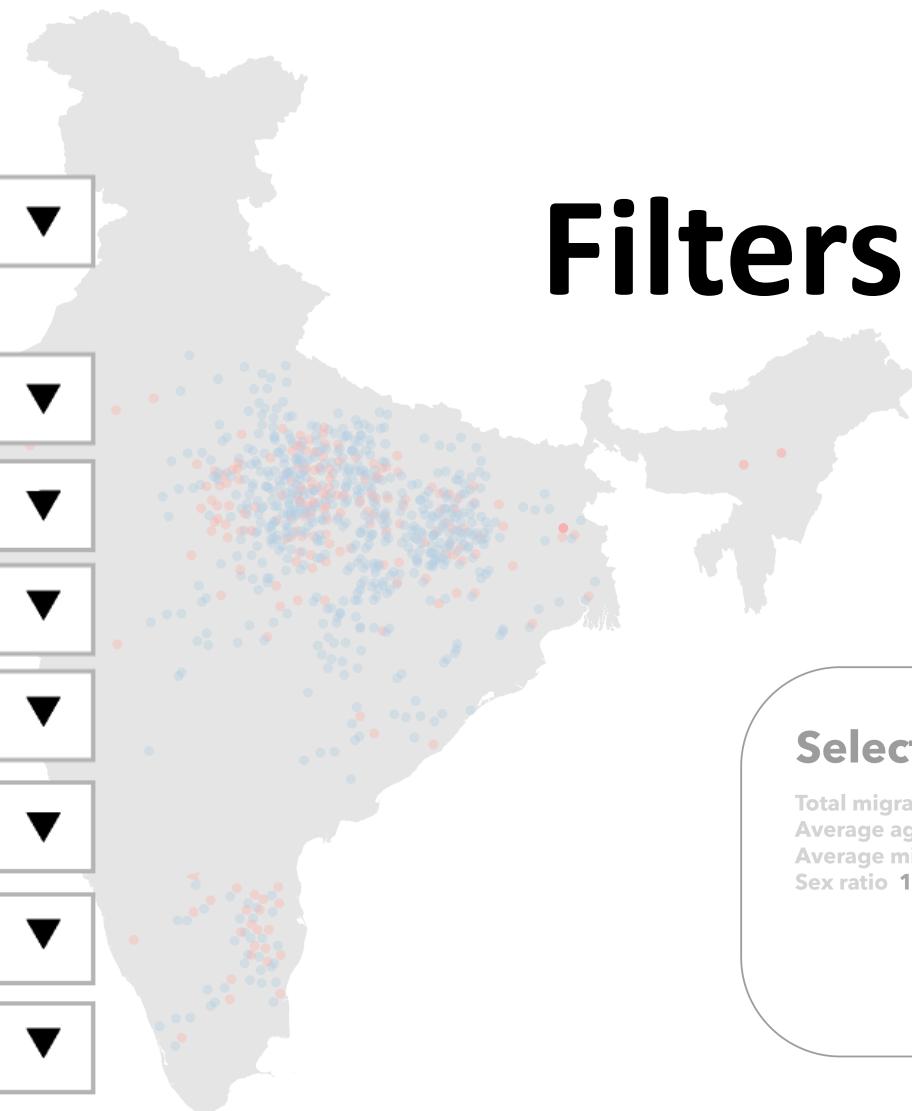
filter by caste/religion

filter by region

filter by port

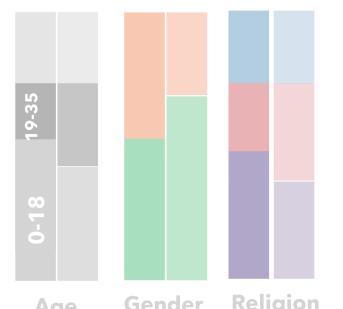
[filter by employer](#)

Clear Filters



Selected

Total migrants 150023 (150023)
Average age 32.5(32.5)
Average migration year 1893 (1893)
Sex ratio 10:1.3



1860

187

187

1877

1878

1879

1880

1910



search for name

Filtered By Religion

color by gender

filter by gender

filter by age

filter by marital status

filter by caste/religion

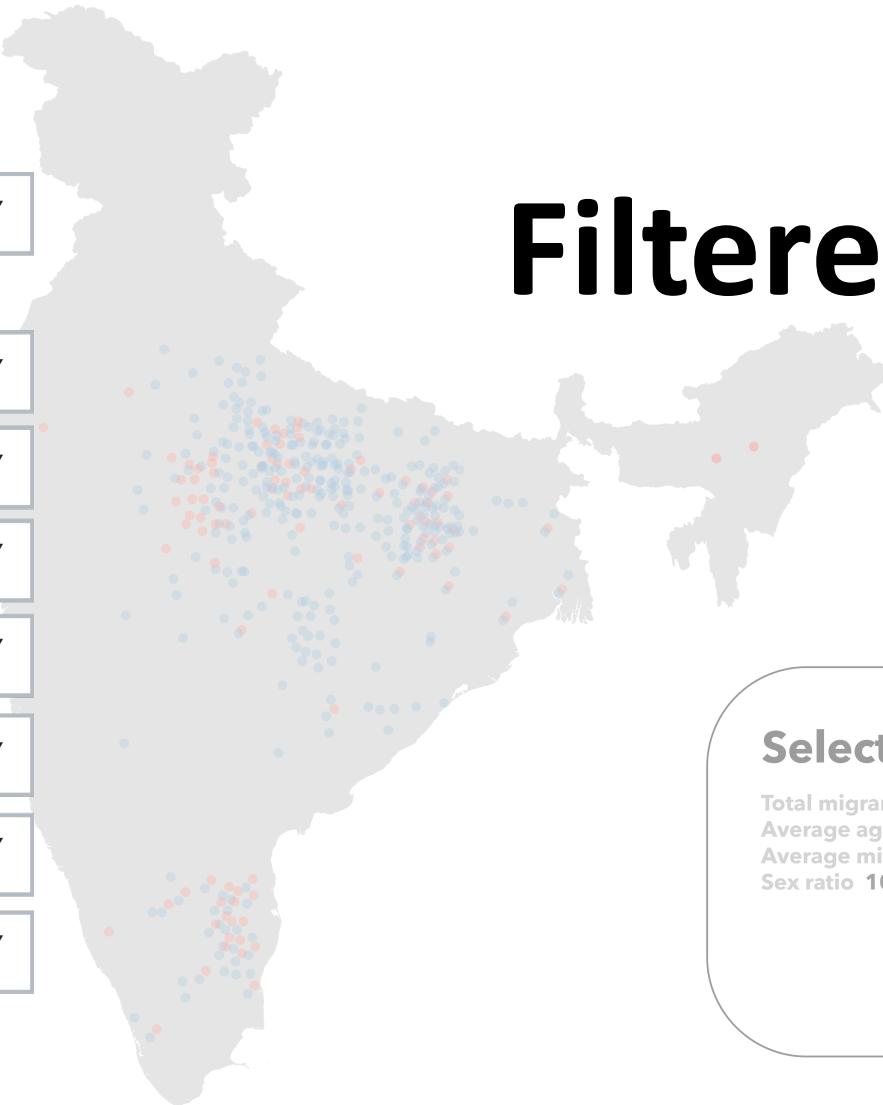
filter by region

filter by port

filter by employer

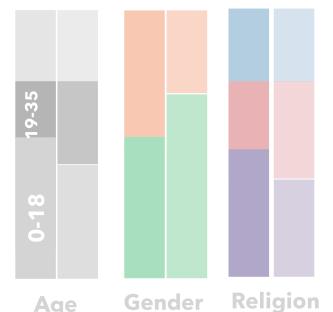
Christian

Clear Filters



Selected

Total migrants 150023 (150023)
Average age 32.5(32.5)
Average migration year 1893 (1893)
Sex ratio 10:1.3



1860

1875

1876

1877

1878

1879

1880

1910



color by gender



search for name

filter by gender



filter by age



filter by marital status



filter by caste/religion



filter by region



filter by port

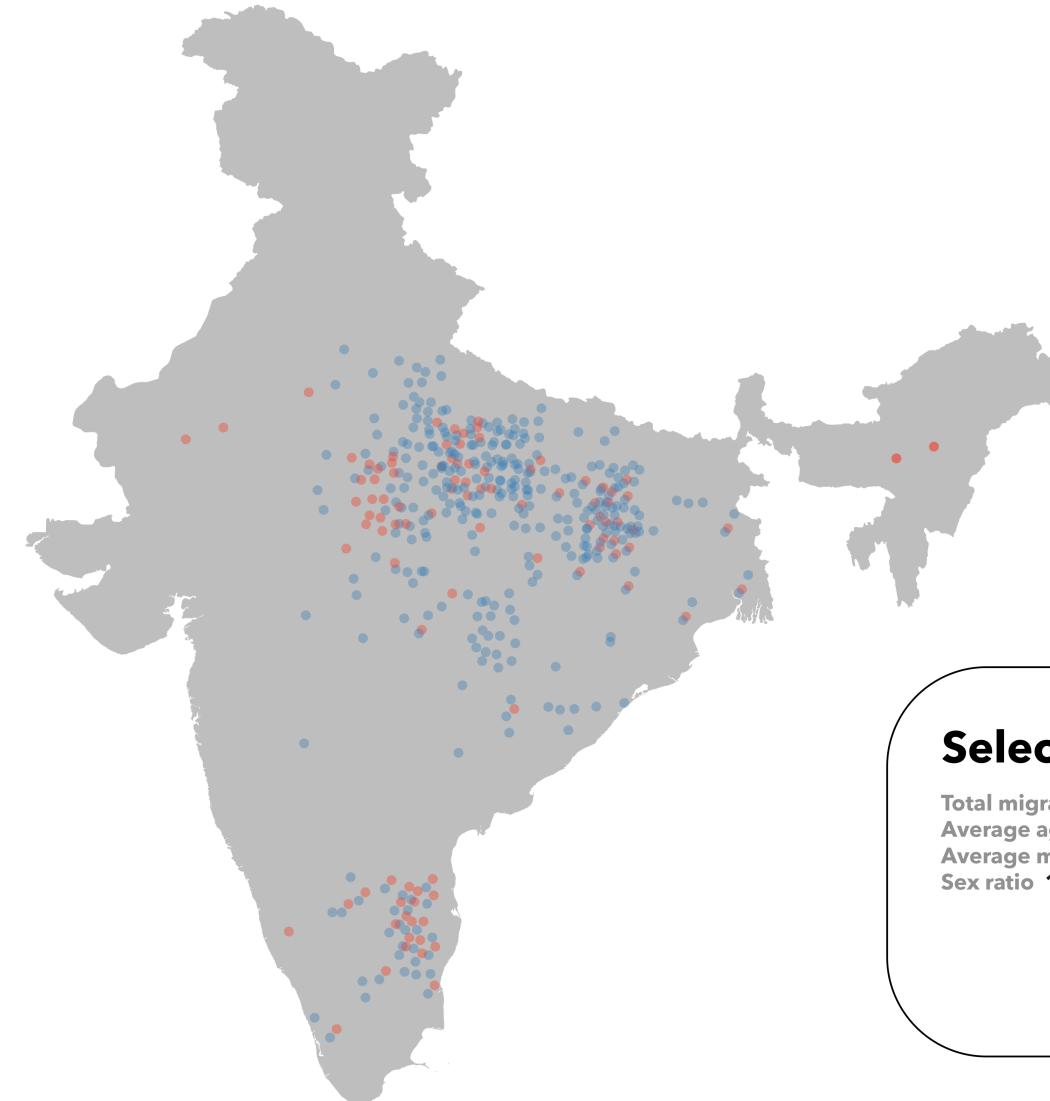


filter by employer



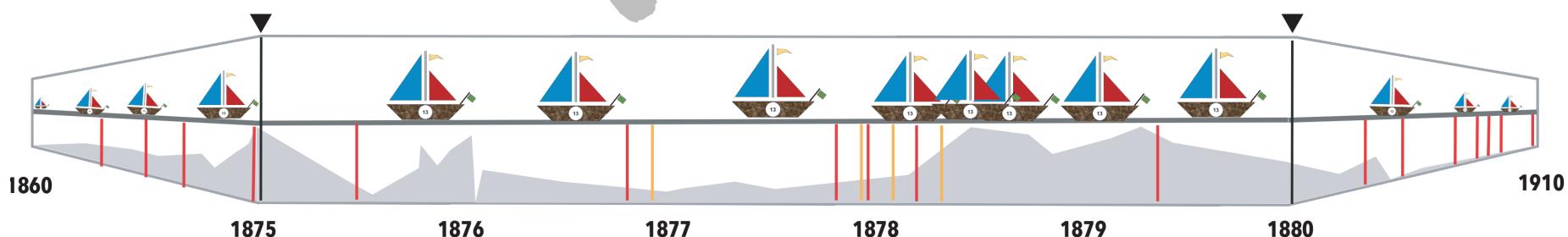
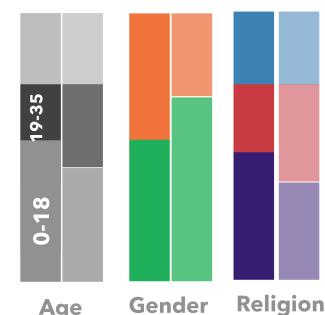
Christian

Clear Filters



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color by gender



search for name

filter by gender



filter by age



filter by marital status



filter by caste/religion



filter by region



filter by port



filter by employer

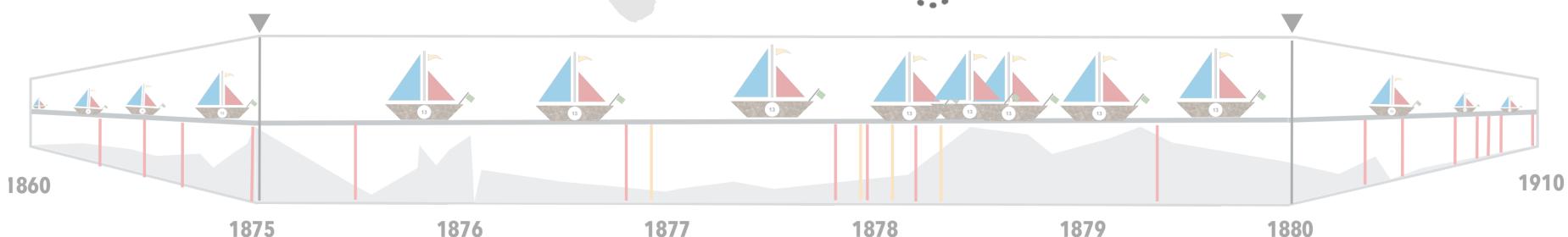


Christian

Clear Filters

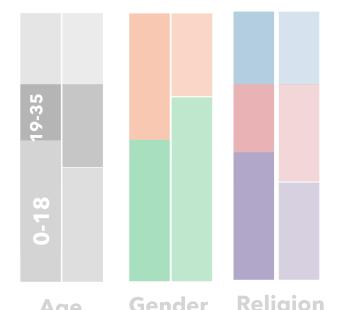
Zooming Capabilities

Magic Tool



Selected

Total migrants 150023 (150023)
Average age 32.5(32.5)
Average migration year 1893 (1893)
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color by gender



search for name

filter by gender



filter by age



filter by marital status



filter by caste/religion



filter by region



filter by port

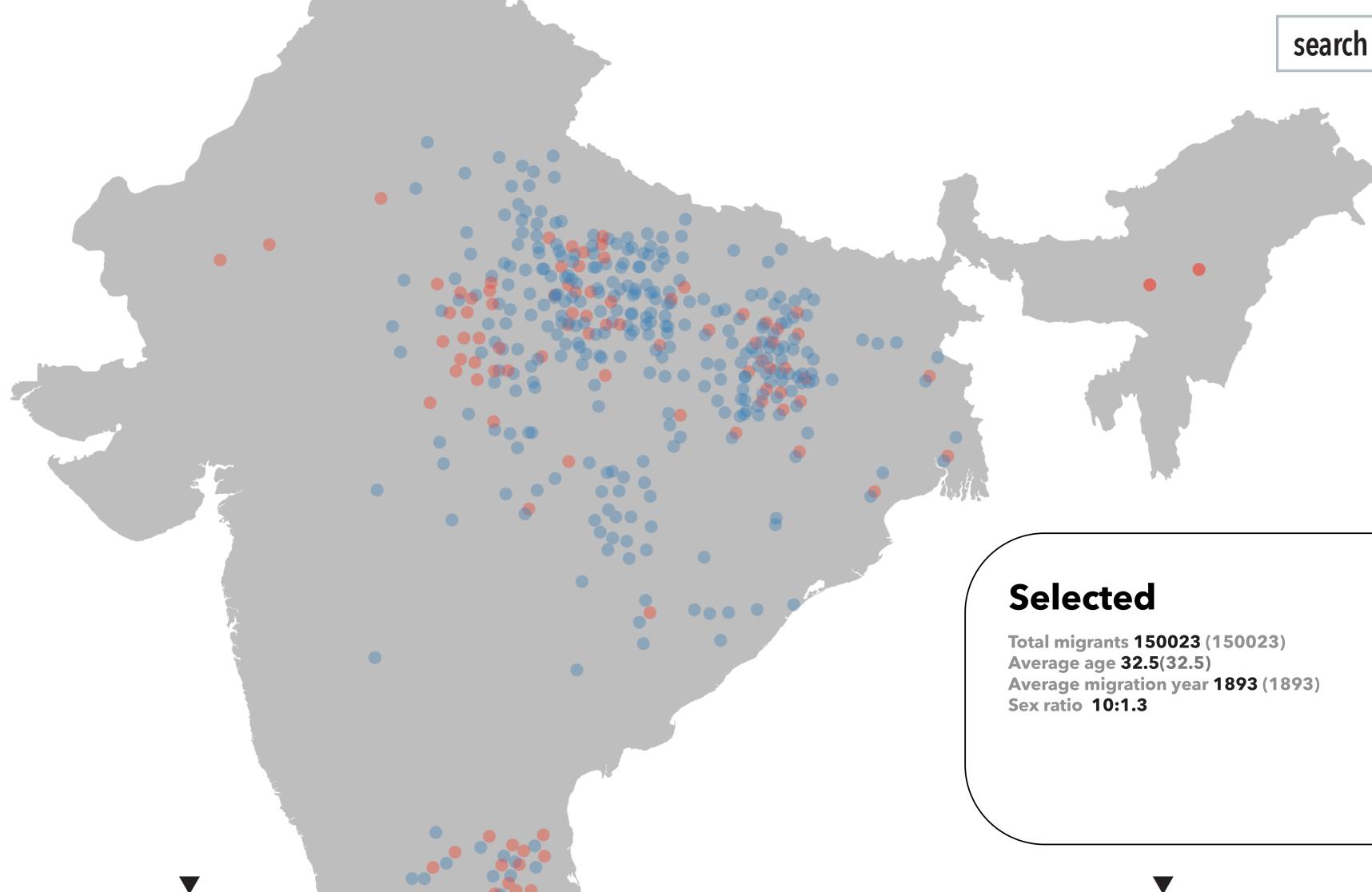


filter by employer



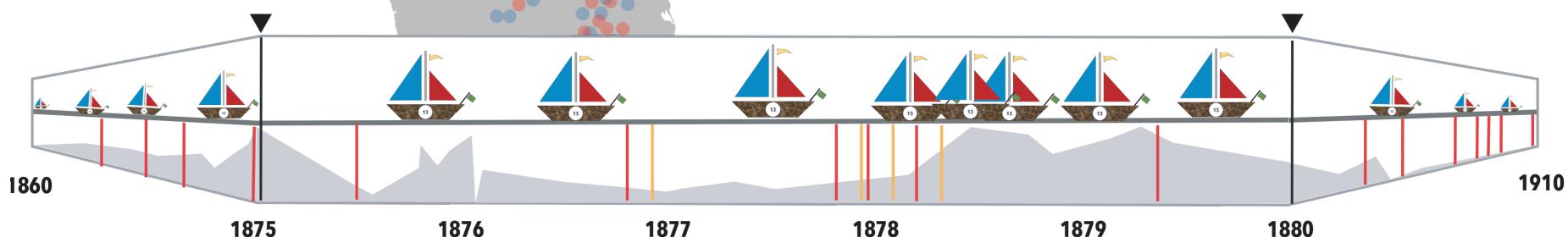
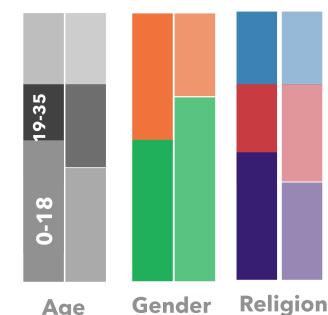
Christian

Clear Filters



Selected

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Average migration year 1893 (1893)
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color by gender



search for name

filter by gender



filter by age



filter by marital status



filter by caste/religion



filter by region



filter by port

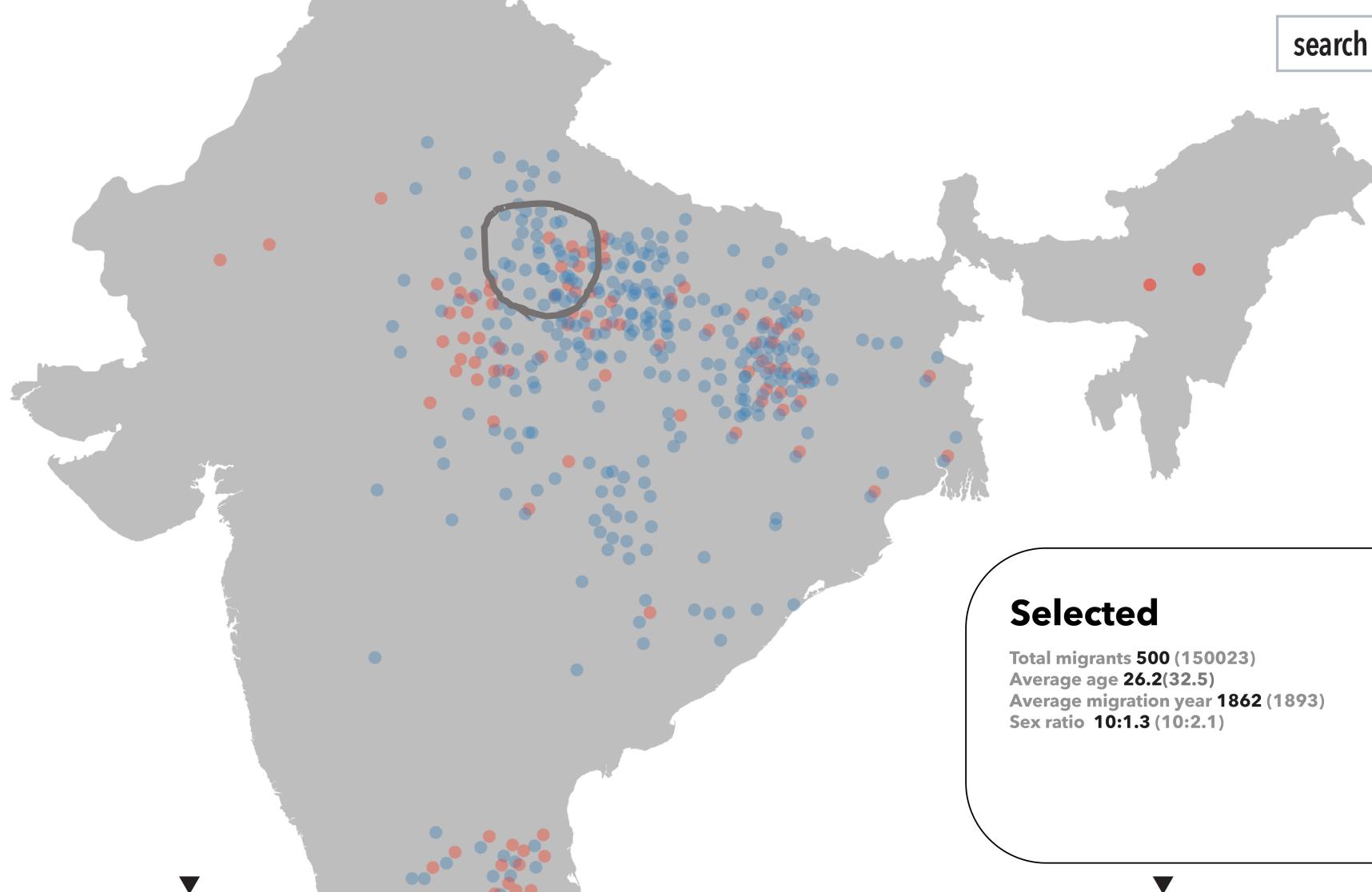


filter by employer



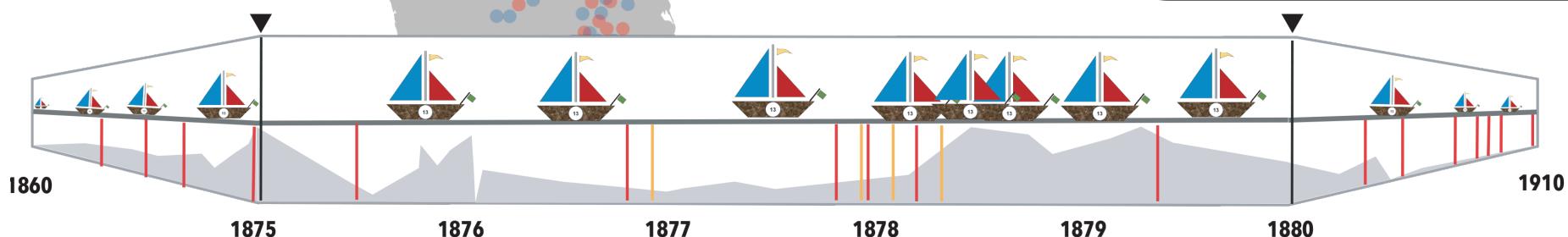
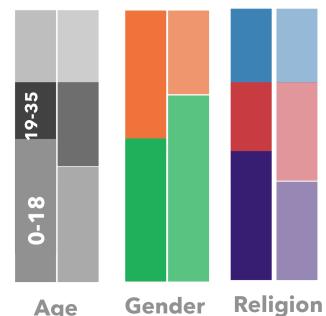
Christian

Clear Filters



Selected

Total migrants 500 (150023)
Average age 26.2(32.5)
Average migration year 1862 (1893)
Sex ratio 10:1.3 (10:2.1)



color by gender



search for name

filter by gender



filter by age



filter by marital status



filter by caste/religion



filter by region



filter by port



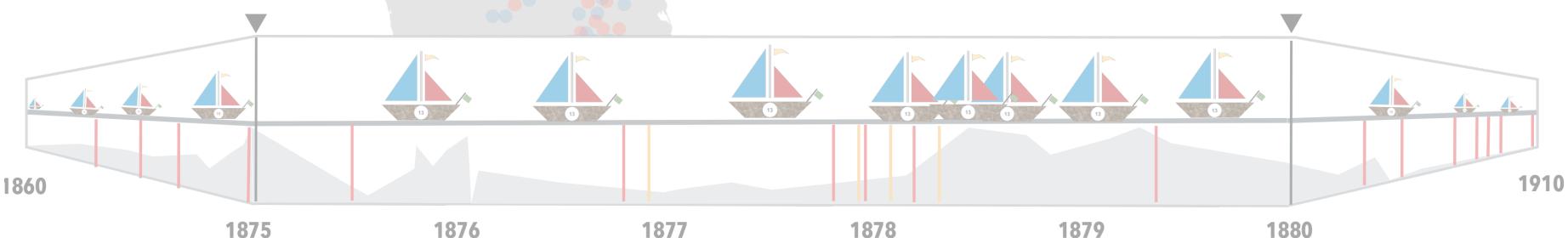
filter by employer



Christian

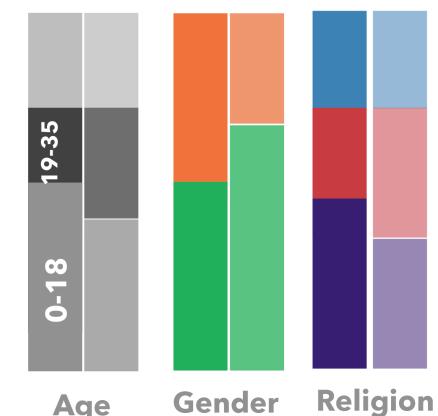
Clear Filters

Selected Area Analysis



Selected

Total migrants **500** (150023)
Average age **26.2(32.5)**
Average migration year **1862 (1893)**
Sex ratio **10:1.3 (10:2.1)**



color by gender



search for name

filter by gender



filter by age



filter by marital status



filter by caste/religion



filter by region



filter by port

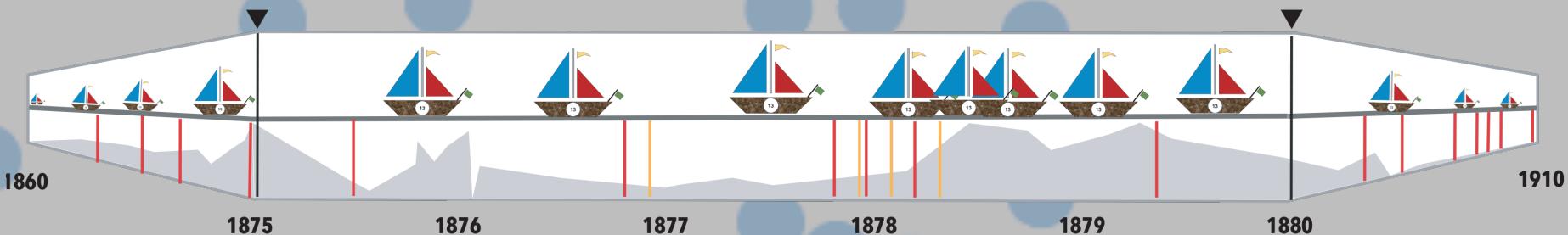


filter by employer



Christian

Clear Filters



color by gender



search for name

filter by gender



filter by age



filter by marital status



filter by caste/religion



filter by region



filter by port

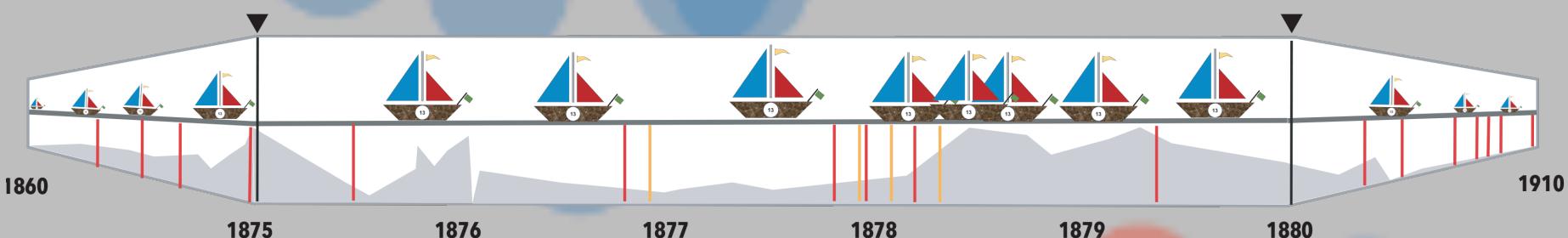
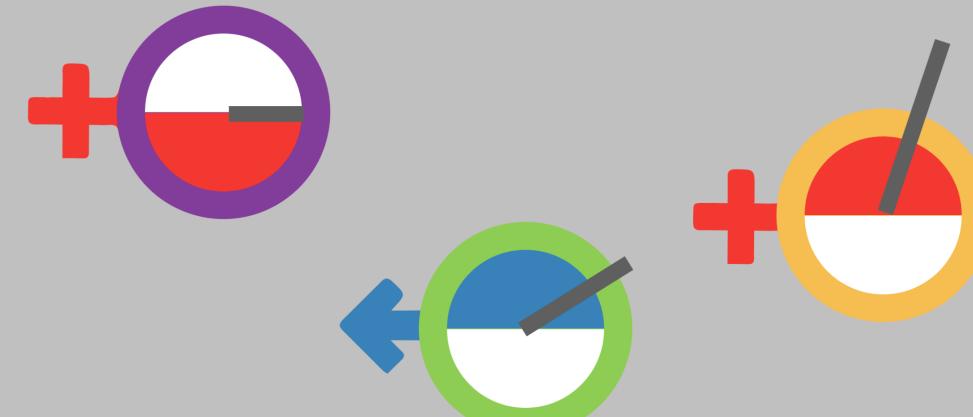


filter by employer



Christian

Clear Filters



color by gender



search for name

filter by gender



filter by age



filter by marital status



filter by caste/religion



filter by region



filter by port



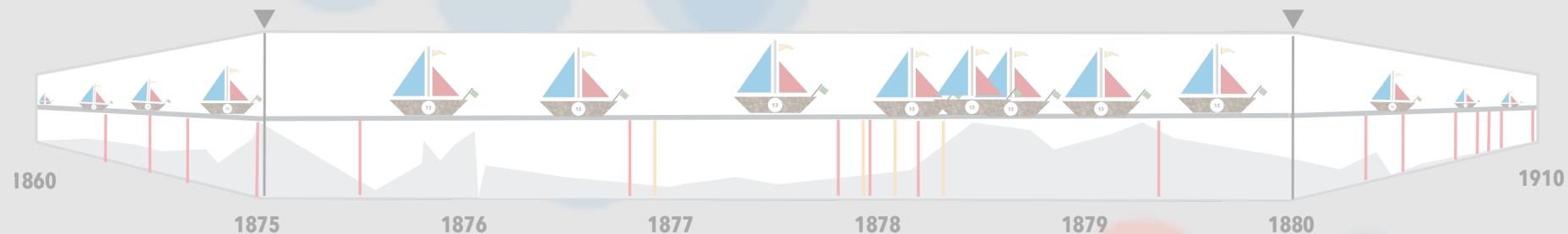
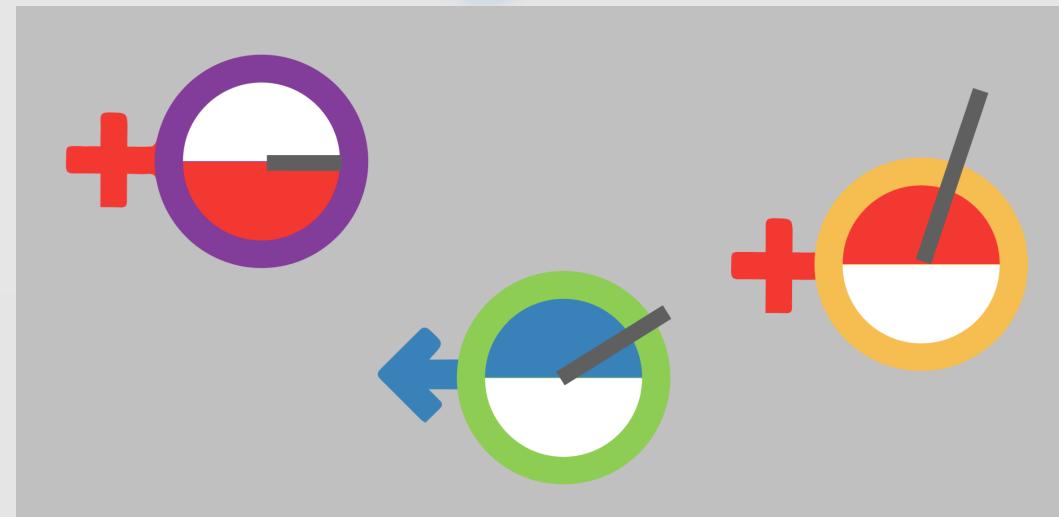
filter by employer



Christian

Clear Filters

Detailed migrant view



color by gender



filter by gender



filter by age



filter by marital status



filter by caste/religion



filter by region



filter by port



filter by employer

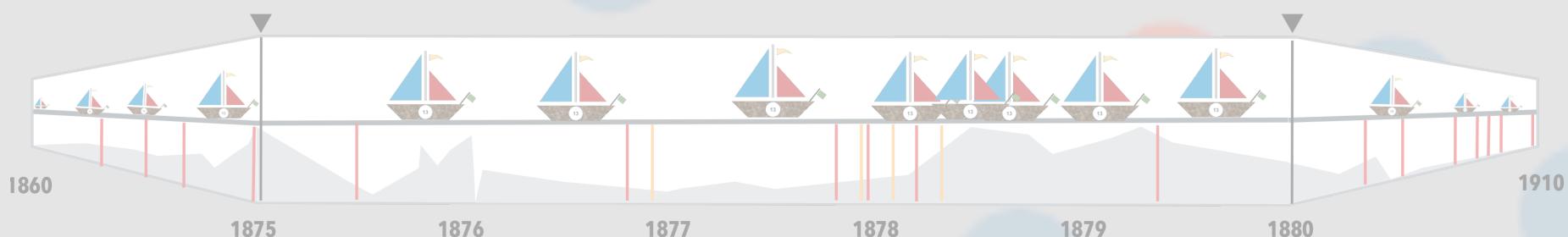


Christian

Clear Filters

Search person By name

search for name



color by gender



filter by gender



filter by age



filter by marital status



filter by caste/religion



filter by region



filter by port



filter by employer

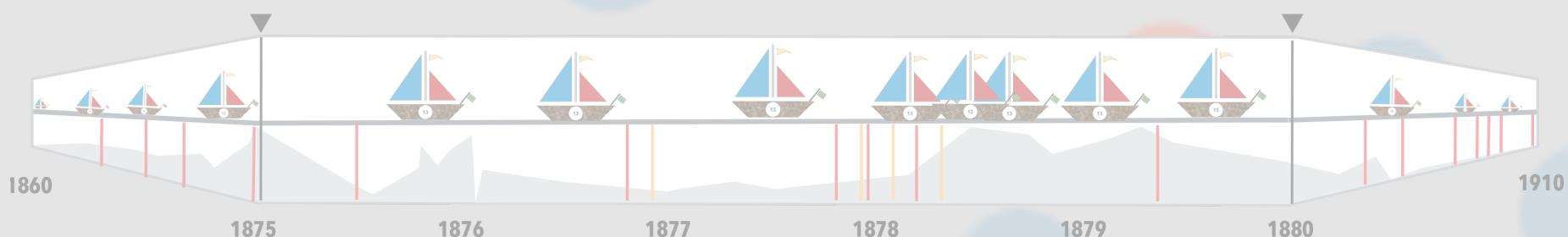


Christian

Clear Filters

Search person By name

Nagium



color by gender ▼

Nagium

filter by gender ▼

filter by age ▼

filter by marital status ▼

filter by caste/religion ▼

filter by region ▼

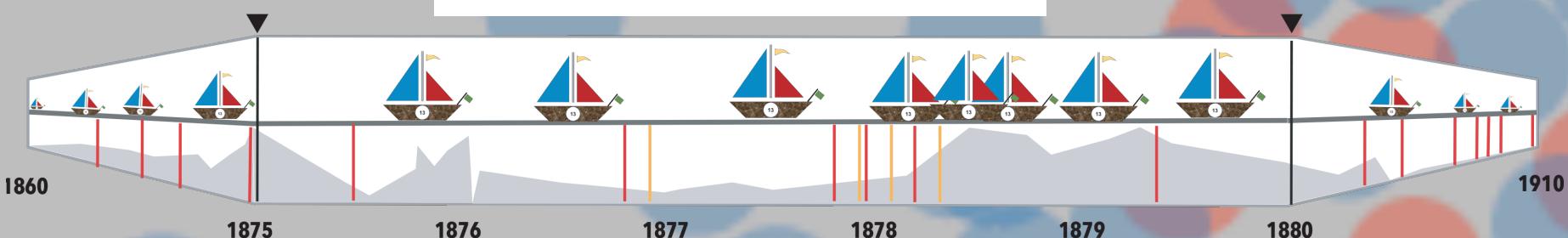
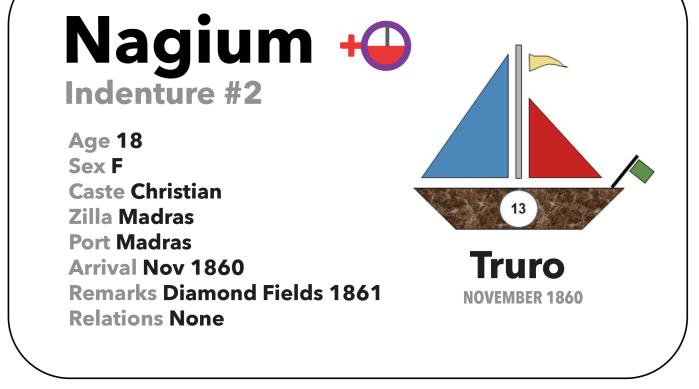
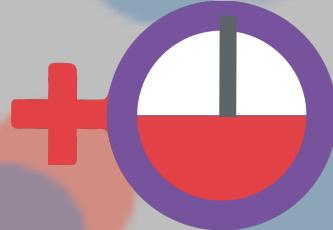
filter by port ▼

filter by employer ▼



Christian

Clear Filters



- color by gender ▾
- filter by gender ▾
- filter by age ▾
- filter by marital status ▾
- filter by caste/religion ▾
- filter by region ▾
- filter by port ▾
- filter by employer ▾

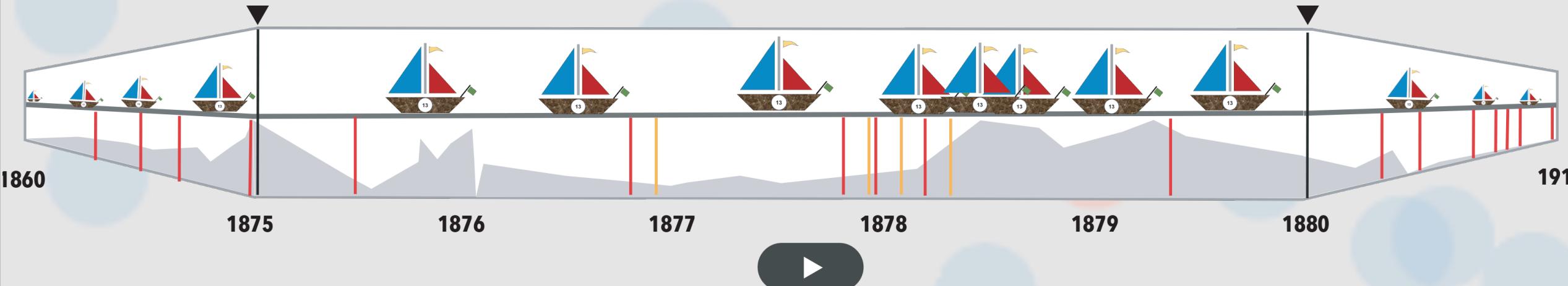
Nagium



Christian

Clear Filters

Timeline view



color by gender ▼

filter by gender ▼

filter by age ▼

filter by marital status ▼

filter by caste/religion ▼

filter by region ▼

filter by port ▼

filter by employer ▼

Christian

Clear Filters

Nagium



Suffolk II

MARCH 1878



235

Total migrants 343
Average age 25.2 (32.5)
Sex ratio 5:3
Births 2
Deaths 14
Port Madras

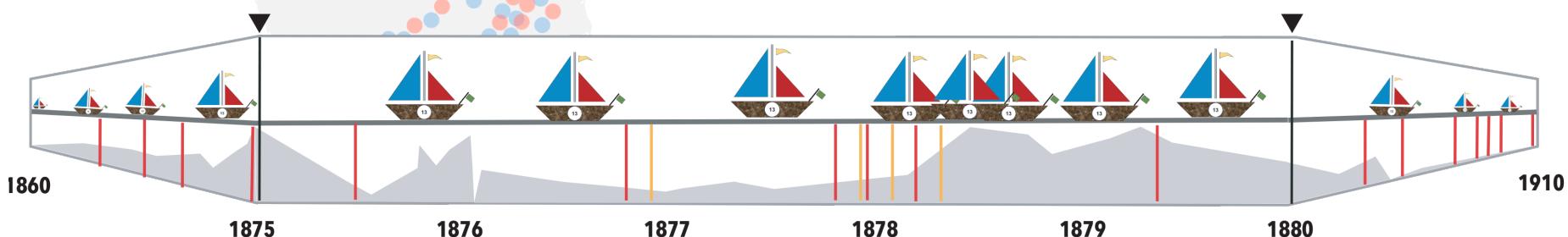
Carnatic I

NOVEMBER 1879



241

Total migrants 241
Average age 45.2 (32.5)
Sex ratio 5:1.3
Births 4
Deaths 4
Port Madras



color by gender



Nagium

filter by gender



filter by age



filter by marital status



filter by caste/religion



filter by region



filter by port

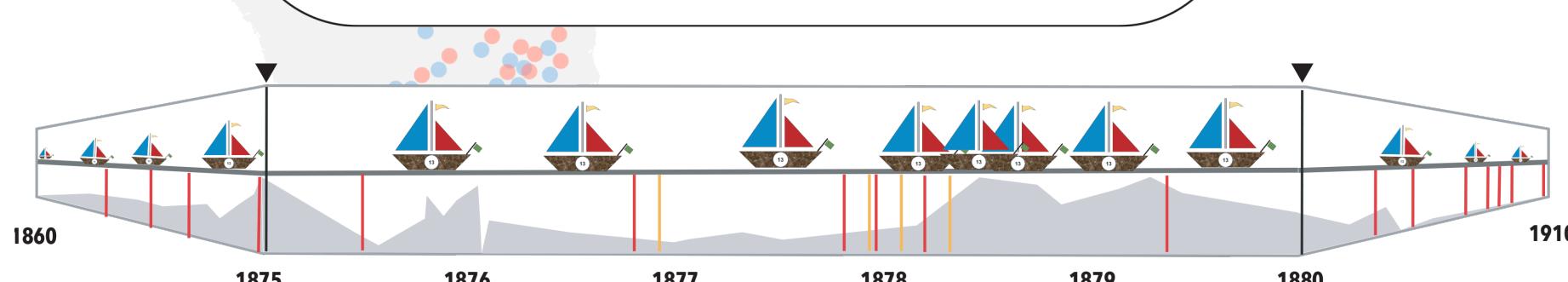
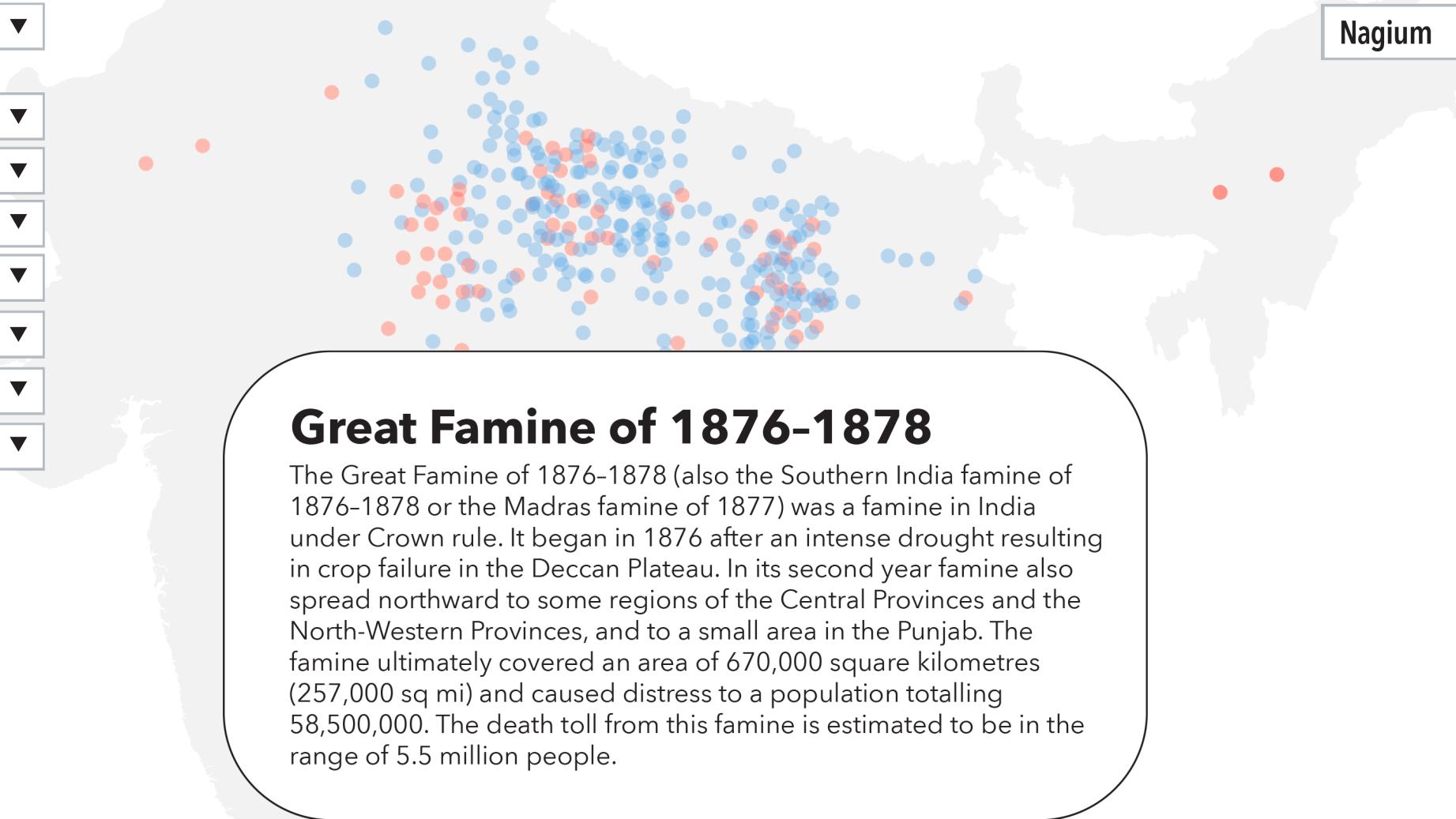


filter by employer

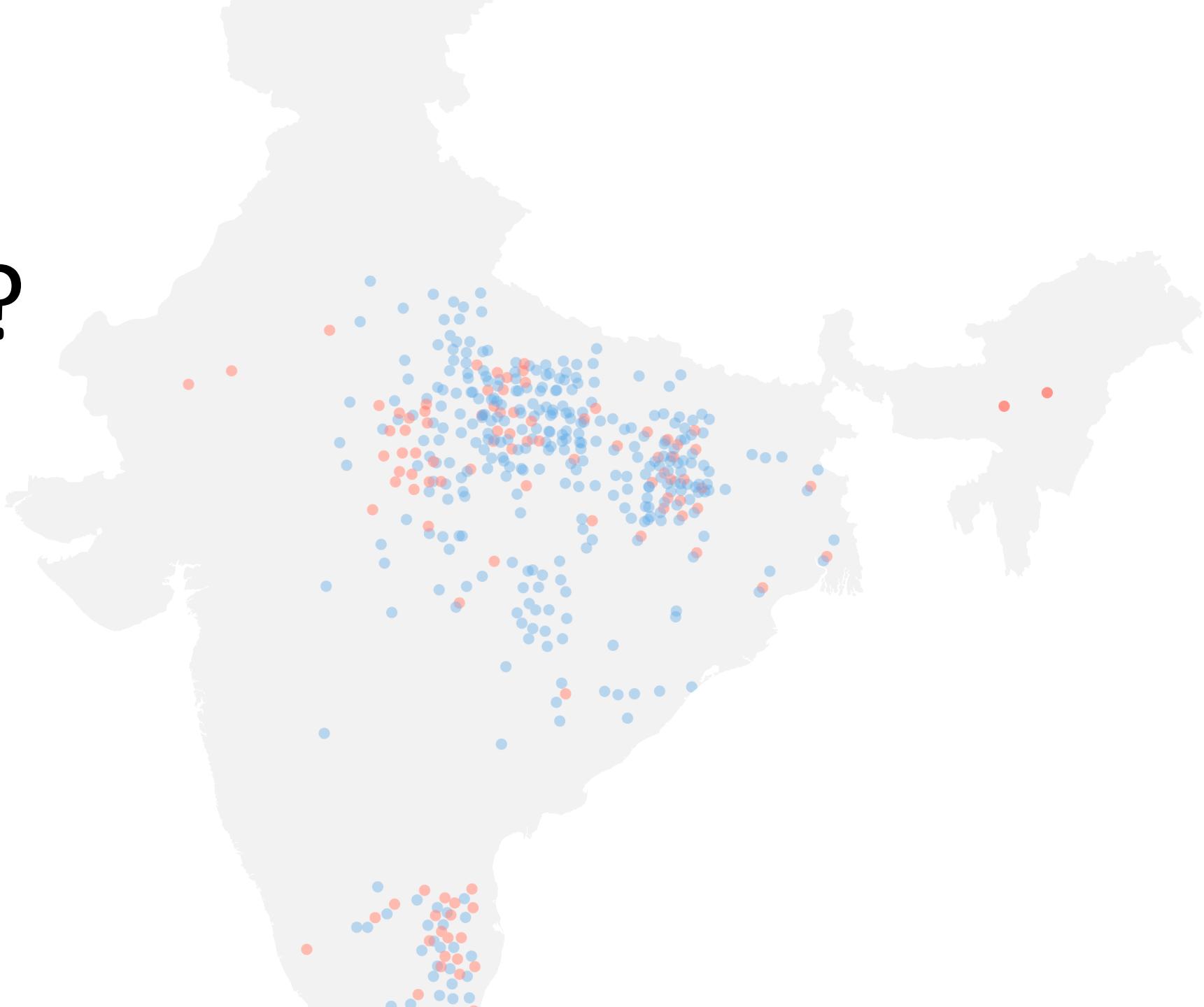


Christian

Clear Filters



Questions?



Thank You.

