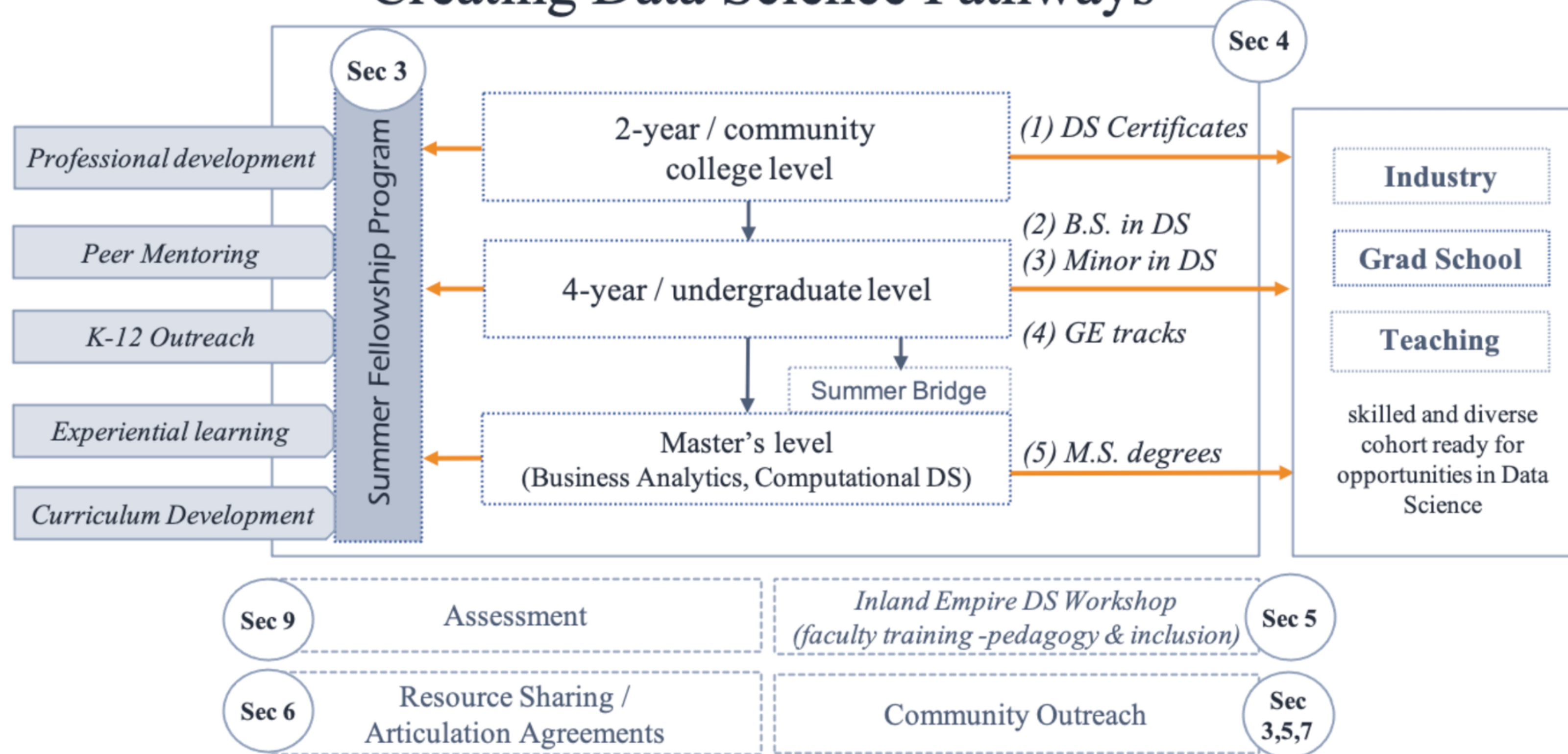


Data Science Career Pathways in the Inland Empire (DS-PATH)

Project Goals

- Create flexible pathways for Data Science education in the Inland Empire region of Southern California
- Provide students with experiential learning opportunities through summer fellowships
- Develop a community of partners that will provide local, tangible, and impactful Data Science projects, and
- Broaden participation of females and underrepresented minorities in Data Science

Creating Data Science Pathways



Optimization and continuous improvement of curriculum, recruitment/outreach, assessment and community partnerships over 3 cohorts / 3 cycles.

The partnership consists of six Hispanic Serving Institutions (HSI) and covers all three segments of California's public higher education system, namely, the University of California (UC), the California State University (CSU) and the Community College (CC) System.



UC Riverside Initiatives

- Data Science Minor (Fall 2022)
- MS in Computational Data Science (Winter 2023)
- New Courses
 - Data Science Ethics (Winter 2023)
 - Data Oriented Introduction to Programming I / II (offered in 2022)

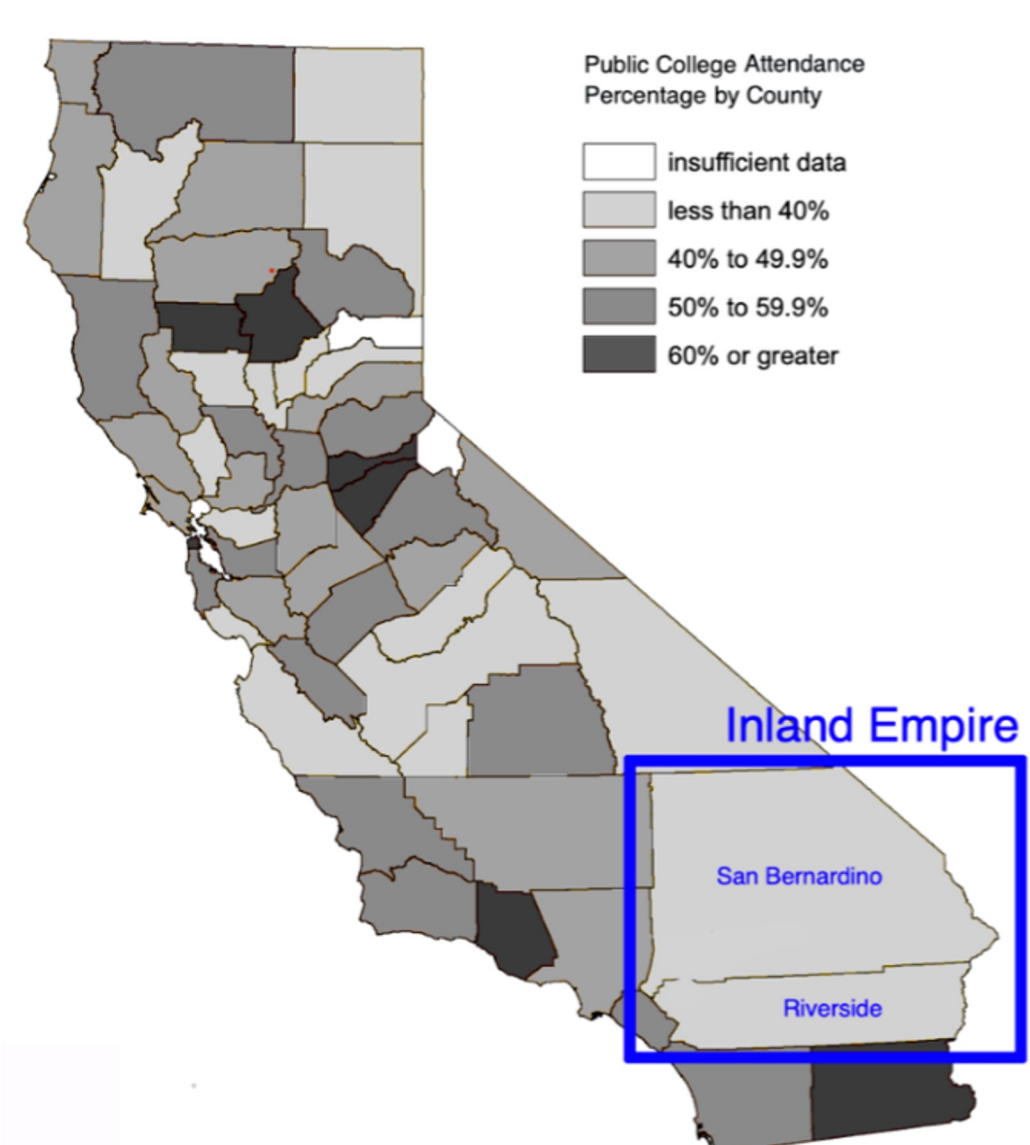
CSU San Bernardino Initiatives

- Data Science Minor (Spring 2023)
 - 8 semester courses
 - Open to all majors
- Data Science Certificate (Spring 2023)
 - 6 semester courses

Community College Initiatives

- Data Science Certificate (Spring 2023)
- Associate Degree of Science in Data Science (Spring 2023)

Impact



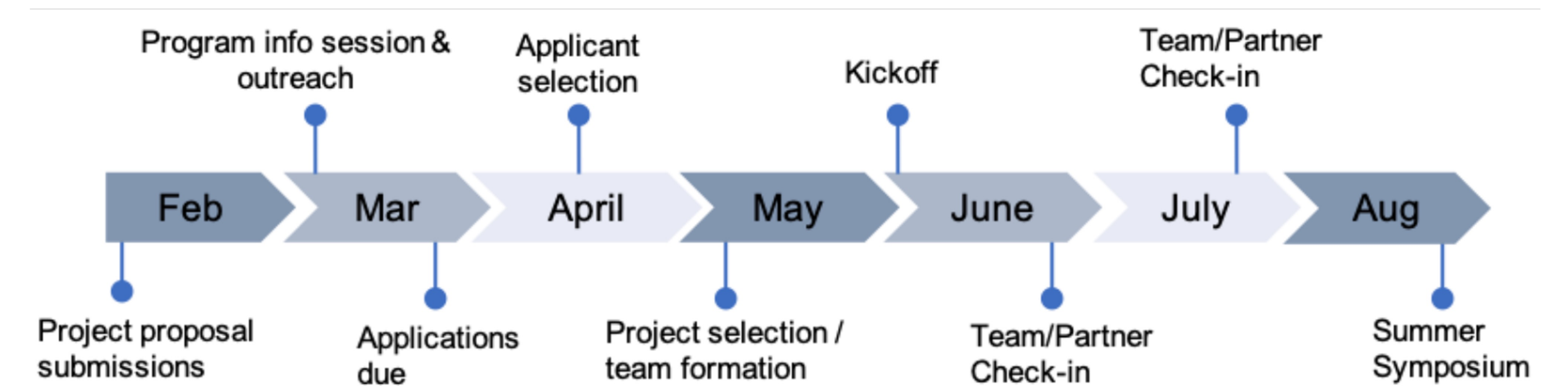
Rank	County	State	Area (sq mi)	Population (2014)	Density (2014)
1	Los Angeles	CA	4,058	10,116,705	2,493
2	Cook	IL	945	5,246,456	5,550
3	Harris	TX	1,703	4,241,370	2,607
4	Maricopa	AZ	9,200	4,087,191	444
5	San Diego	CA	4,207	3,263,431	776
6	Orange	CA	791	3,145,515	3,979
7	Miami-Dade	FL	1,898	2,662,874	1,403
8	Kings	NY	71	2,621,793	37,021
9	Dallas	TX	871	2,518,638	2,891
10	Queens	NY	109	2,321,580	21,391
11	Riverside	CA	7,206	2,329,271	323
12	San Bernardino	CA	20,057	2,112,619	105
13	King	WA	2,116	2,079,967	983

(b) Population

	Hispanic or Latino (%)	Median Home Values (\$)
Riverside	48.4	361,100
San Bernardino	52.8	329,400
Los Angeles	48.5	605,800
San Diego	33.5	581,100
Orange	34.3	714,300
San Francisco	15.2	1,290,000
Alameda	22.5	857,800
San Mateo	24.8	1,334,500
Santa Clara	25.9	1,283,000

(c) Demographics

Data Science Summer Fellowship Program



The DS-PATH Summer Fellowship Program is a 10-week program that provides data science training and education for students from partnering institutions.

- Vertical teams composed of community college, undergraduate, and graduate students
- Real-world projects proposed by faculty and industry partners

Summer 2022 Cohort

35 students (25 UCR, 6 CSUSB, 6 community college students)



• **10 Talks:** Data Science Research and Applications

• **16 Workshops:** Professional development, technical workshops, and curriculum development

• **10 Team Projects:** Students worked on authentic research and applied data science projects in teams of 3-4 students under the leadership of a faculty / industry mentor.

Industry & Faculty Projects



Projects

- ESRI - GIS Case Study
- FAA Event Report Text Mining
- JPL CA Central Valley Land Subsidence Dashboard
- JPL CA Central Valley Land Subsidence Modeling
- Riverside County Traffic Congestion Analysis
- Social Distancing during COVID-19 Data Analysis
- Lexi, the Medical AI
- Monet Short Video Performance Score Prediction Algorithm
- GIS Mapping - Client Map and Resource Gaps Anomaly Detection

Inland Empire Faculty Workshop (Oct. 2022)

Brings together 6-12 teachers, community college and university faculty to share data science initiatives at their institutions.

