

SUBMITTAL TO THE BOARD OF SUPERVISORS
COUNTY OF RIVERSIDE, STATE OF CALIFORNIA



ITEM: 3.27
(ID # 22323)

MEETING DATE:
Tuesday, July 11, 2023

FROM : HUMAN RESOURCES AND RUHS - PUBLIC HEALTH :

SUBJECT: HUMAN RESOURCES & RUHS - PUBLIC HEALTH: Classification & Compensation Recommendation to create a new Public Health Data Scientist classification; and amend Ordinance No. 440 pursuant to Resolution No. 440-9378 submitted herewith, All Districts. [Total Cost \$0, with an ongoing cost of \$0, 100% Department Funded]

RECOMMENDED MOTION: That the Board of Supervisors:

1. Approve the creation of the Public Health Data Scientist classification; and,
2. Amend Ordinance No. 440 pursuant to Resolution No. 440-9378.

ACTION: Policy

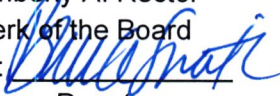

Kim Saruwatari, Director of Public Health 6/26/2023


Michael Bowers, Assistant HR Director 6/28/2023

MINUTES OF THE BOARD OF SUPERVISORS

On motion of Supervisor Perez, seconded by Supervisor Jeffries and duly carried, IT WAS ORDERED that the above matter is approved as recommended.

Ayes: Jeffries, Spiegel, Perez and Gutierrez
Nays: None
Absent: Washington
Date: July 11, 2023
xc: H.R., RUHS-PH

Kimberly A. Rector
Clerk of the Board
By: 
Deputy

**SUBMITTAL TO THE BOARD OF SUPERVISORS COUNTY OF RIVERSIDE,
STATE OF CALIFORNIA**

FINANCIAL DATA	Current Fiscal Year:	Next Fiscal Year:	Total Cost:	Ongoing Cost
COST	\$ 0	\$ 0	\$ 0	\$ 0
NET COUNTY COST	\$ 0	\$ 0	\$ 0	\$ 0
SOURCE OF FUNDS: 100% Department Funds			Budget Adjustment: No	
			For Fiscal Year: 23/24	

C.E.O. RECOMMENDATION: Approve

BACKGROUND:

Summary

The Data Unit of Riverside University Health System - Public Health (RUHS-PH) Epidemiology & Program Evaluation employs Epidemiologists and research specialists who analyze data, prepare reports and presentations, and use statistics and Geographic Information System data to guide program and policy development. The Data Unit works with community partners to identify, evaluate, and report emerging diseases and their risk factors to empower residents to make informed health decisions.

RUHS-PH requested that Human Resources create a new, Public Health Data Scientist classification to lead the department's data modernization efforts. The Public Health Data Scientist will process raw data collected by Epidemiologists and research specialists and extract meaningful information from and interpret the data using statistical and machine learning tools and techniques. RUHS-PH has identified a gap in its organizational structure and requires a class to develop and deploy scalable, flexible, and sustainable technologies.

An external market review was conducted for a Public Health Data Scientist and yielded a market range of \$103,557 - \$138,779/year (**Attachment II**). As such, it is recommended to use the external market and establish the Public Health Data Scientist job classification at a salary of \$103,557 - \$138,779/year.

Classification Addition:

Public Health Data Scientist: It is recommended to add this classification to the Class and Salary Listing using salary plan/grade SEU 870 (\$103,557 - \$138,779) (**Attachment III**).

Impact on Residents and Businesses

There is no impact on Residents or Businesses. RUHS-PH anticipates that the proposed Public Health Data Scientist classification will improve the department's ability to respond to public health crises in the County.




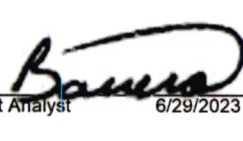
Additional Fiscal Information

The approximate cost to fill this position for the remainder of FY 23/24 would be \$193,490, including benefits. The approximate cost to fill this position for an entire fiscal year would be \$201,230, including benefits. The Department has indicated that the cost associated with adding and filling this position is included in their existing budget and will not require a budget adjustment.

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ATTACHMENTS:

- I. Resolution No. 440-9378
- II. Public Health Data Scientist Market Data
- III. Public Health Data Scientist Job Description


Douglas Cordonez Jr.  6/28/2023  Alonzo Barrera, Principal Management Analyst  6/29/2023

1 RESOLUTION NO. 440-9378

2
3 BE IT RESOLVED by the Board of Supervisors of the County of Riverside, State of California, in
4 regular session assembled on July 11, 2023, that pursuant to Section 3(a)(iv) of Ordinance No. 440, the
5 Director of Human Resources is authorized to amend the Class and Salary Listing of Ordinance No. 440,
6 operative the beginning of the pay period following approval, as follows:
7

8 <u>Job</u>			<u>Salary</u>
<u>Code</u>	<u>+/-</u>	<u>Class Title</u>	<u>Plan/Grade</u>
9 86252	+	Public Health Data Scientist	SEU 870

10 ROLL CALL:

11 Ayes: Jeffries, Spiegel, Perez and Gutierrez
12 Nays: None
13 Absent: Washington

14 The foregoing is certified to be a true copy of a resolution duly adopted by said Board of Supervisors on
15 the date therein set forth.

16 KIMBERLY A. RECTOR, Clerk of said Board

17 By: 
18 Deputy

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PUBLIC HEALTH DATA SCIENTIST

Class Code: 86252

COUNTY OF RIVERSIDE
Established Date: Jul 13, 2023
Revision Date: Jul 13, 2023

SALARY RANGE

\$49.79 - \$66.72 Hourly
\$8,629.75 - \$11,564.92 Monthly
\$103,556.96 - \$138,779.06 Annually

CLASS CONCEPT:

Under general supervision, develops and applies methods to identify, collect, process, organize, and analyze structured and unstructured data using statistical prediction, inference and optimization; effectively communicates results to the Public Health Department; develops or assists in the development of new analytic methods, functions and data structures necessary to complete complex projects; performs other related duties as required.

The Public Health Data Scientist is an advanced journey level classification and reports to an appropriate supervisory or manager level position. Incumbents work independently while performing duties of considerable difficulty to complete moderately complex projects or major aspects of large/complex projects that may be department-wide in scope. Incumbents deploy techniques such as data extraction, transformation and loading; classical statistical analysis and machine learning, including predictive and prescriptive modeling and optimization; and data visualization to generate critical information and knowledge and effectively communicate findings to technical and nontechnical stakeholders to support data-driven program design, management and decision-making. Incumbents work with data sets characterized by large volume, moderate complexity and significant heterogeneity, integrating data from various sources, requiring direct collaboration with department IT staff to design and provide feedback on data systems and processes necessary to support the IT infrastructure and security compliance requirements.

The Public Health Data Scientist is distinguished from the Research Specialist II by the expertise and knowledge of the former in developing machine learning algorithms to analyze data, build predictive models and create visualizations and dashboards from which the latter uses to plan and design research projects, interpret findings using statistical or qualitative data analysis, and draw conclusions.

REPRESENTATION UNIT: SEIU - Professional

EXAMPLES OF ESSENTIAL DUTIES:

(Depending on the area of assignment, duties may include, but are not limited to, the following)

- Collaborate with Public Health Department and Epidemiology and Program Evaluation (EPE) Branch stakeholders to solicit, define and manage data science projects from conception through implementation, including identifying and developing statements of business problems; conduct

exploratory data analysis and data mining; develop model specification requirements and conduct advanced statistical analyses.

- Use statistical tools and software to develop and present visualizations of findings and recommendations that can be used to support business decisions and allocation of resources.
- Work with Public Health Department and EPE Branch stakeholders to document business requirements and help frame business problems so that appropriate corresponding data science techniques can be identified and applied.
- Collaborate with Public Health Department and EPE Branch stakeholders to understand, identify and select available and relevant sources of data for use cases, including internal, external, structured, and unstructured data sources.
- Work with Public Health Information Technology team to support collection, integration and retention requirements for large sets of structured and unstructured data from various sources and consults with data engineers and architects on the design and architecture of relevant data systems and processes.
- Collaborate with other department data scientists, epidemiologists, research specialists, and IT staff to select, evaluate, improve, and document tools and systems to strengthen EPE Branch and other Public Health Department Branches analytic capacity.
- Independently conduct advanced analytical studies for the resolution of business problems and transfigures data into critical information by selecting and deploying appropriate advanced statistical techniques such as machine learning, bivariate and multivariate analyses, predictive/prescriptive analytics, and optimization.
- Plan, design and manage experiments, consumer surveys and other data collection projects to augment existing sources of data as necessary to solve business problems.
- Convey findings and conclusions of work orally, in writing, visually, in presentations, and by developing interactive tools as appropriate to communicate effectively with a wide range of audiences, including technical and nontechnical staff, stakeholders and members of the public.
- Work with EPE Branch staff to understand the implications of analyses and to ensure that findings are actionable and support data-driven programs, policies and operational decision-making.
- Assist in implementing recommended business process changes in ways that both retain fidelity to best practices identified through the analysis and recognize the operational realities underlying existing business processes.
- Work with functional teams to develop and implement products, services and tools, such as dashboards and reports, emerging from the analysis.
- Recommend ongoing improvements to methods and algorithms that lead to findings, including new information.
- Provide business metrics for departmental projects to show improvements both initially and over multiple iterations; provide ongoing tracking and monitoring of performance of decision systems and statistical models and troubleshoot and implement enhancements and fixes to systems as needed.
- Access ongoing training and professional development opportunities to maintain familiarity with current industry and academic research to apply the latest and most useful statistical learning techniques to extract patterns and trends from data.

RECRUITING GUIDELINES:

Education: Graduation from an accredited college or university with a bachelor's degree in a field of applied research such as data science, computer science, mathematics, statistics, business analytics, psychology, or public health that included 12 semester or 18 quarter units of coursework in data science, predictive analytics, quantitative research methods, or statistical analysis. (A master's degree from an accredited college or university in a related field may substitute for one year of the required experience. A PhD in a related field may substitute for two years of the required experience.)

Experience: Four years of applying machine learning, predictive analytics, data management, and hypothesis-driven data analysis to produce actionable recommendations to support data driven program, policy and operational decision-making.

Knowledge of: Data extraction, transformation and loading techniques; programming languages such as R, SAS and/or SQL; data visualization tools such as Tableau, Python and PowerBi; one or more of advanced Machine Learning techniques such as Classification, Prediction, Recommender Systems, Anomaly Detection, or Optimization; fundamentals and principles of epidemiology, biostatistics and public health; security and confidentiality requirements for reportable disease/public health surveillance data and protection of public health information; classical statistical analysis methodology and machine learning, including predictive and prescriptive modeling and optimization.

Ability to: Visualize data to generate critical information and knowledge and effectively communicate findings to technical and nontechnical stakeholders to support data-driven program design, management and decision-making; apply machine learning techniques to big data systems (e.g., Spark and Hadoop) to largescale datasets; write SQL code using multiple tools such as SQL Server Management Studio or GUI programs that assist with developing queries and reports; organize, synthesize and analyze large amounts of information.

OTHER REQUIREMENTS:

License: Possession of a valid California Driver's License may be required.

PRE-EMPLOYMENT:

All employment offers are contingent upon successful completion of both a pre-employment physical exam, including a drug/alcohol test, and a criminal background investigation, which involves fingerprinting. (A felony or misdemeanor conviction may disqualify the applicant from County employment.)

PROBATIONARY PERIOD:

As an Approved Local Merit System, all County of Riverside employees, except those serving "At Will," are subject to the probationary period provisions as specified in the applicable Memorandum of Understanding, County Resolution, or Salary Ordinance. Temporary and Per Diem employees serve at the pleasure of the agency/department head.

External Market Survey Data

Classification Name: **Public Health Data Scientist**

Riv Co Class Code: **XXXXX**

Market Research

Survey Data

Jurisdiction	Title	Job Code	Min Salary	Max Salary	Spread	Midpoint	Midpoint Hrly Rate	Outlier	HASC Annual	HASC 50%
Los Angeles County	Data Scientist	1763	\$106,081	\$142,954	34.76%	\$124,517.50	\$59.86			
Orange County	No Comparable Class						\$0.00			
San Bernardino County	No Comparable Class						\$0.00			
San Diego County	No Comparable Class						\$0.00			
Ventura County	No Comparable Class						\$0.00			
IEHP	Healthcare Data Analyst III		\$103,708	\$132,226	27.50%	\$117,967.00	\$56.71			
Payfactors	Data Scientist II		\$100,883	\$141,157	39.92%	\$121,020.00	\$58.18		\$121,020.00	\$58.18
	County Mean:		\$103,557	\$138,779	34.01%					
	County Median:		\$103,708	\$141,157	36.11%					
Riverside County	<i>Public Health Data Scientist</i>	XXXXX	\$103,557	\$138,779	34.01%	\$121,168				
	Dollar difference from Mean:		\$0	\$0						
	Percentage difference from mean:		0.00%	0.00%						
	Dollar difference from median:		-\$151	-\$2,378						
	Percentage difference from median:		-0.15%	-1.68%						

Notes:

Run Date: 3/17/2023

Date Prepared/Revised: 4/24/2023 By: DP