STATE OF CALIFORNIA *Class Code: 3105*
Judicial Branch *Band/Grade/Subgrade: C44*
Judicial Council of California *FLSA Status: Exempt*
Established: November 1, 2023

Data Scientist

JOB FAMILY DEFINITION
This classification encompasses a range of work in which incumbents are responsible for collecting and analyzing data to communicate actionable insights and understand complex data from an informed perspective to help make predictions for the Judicial Council and client courts. This classification is only used within of the Office of Court Research. This class specification represents the type and level of work performed recognizing that specific work assignments may differ from one incumbent to another.

CLASS SUMMARY
The Data Scientist serves as a data advisor and technical expert for setting the standards and policies regarding project design, data analysis, integration, presentation, and dissemination of large, complex and/or varied datasets that have business, financial, and policy impact on the judicial branch across multiple subject matter domains. In this capacity, the Data Scientist serves as an expert level advisor to Judicial Council offices and executive leadership to use data to inform, educate, predict, and anticipate impacts to the judicial branch.

DISTINGUISHING CHARACTERISTICS
The Data Scientist is distinguished from other Judicial Council classes in that the Data Scientist, (1) establishes and determines standards and policies related to data analytics, governance, collection and reporting for Judicial Council offices and the branch; (2) functions as the highest-level authority in providing strategic recommendations on the design and approach of projects; and (3) serves as a master level expert with the highest level of technical knowledge and expertise. Incumbents are the highest point of technical escalation for issues related to data analytics across the Judicial Council.

Work of the Data Scientist requires the consistent exercise of discretion and judgment, using advanced knowledge, and routinely requires systems analysis and/or coding.

EXAMPLES OF ESSENTIAL DUTIES *(The duties listed are illustrative only and represent the core areas of responsibilities; specific position assignments will vary depending on business needs.)*
- Determines the standards and establishes policies for data design, governance, and analytics for Judicial Council offices and branch wide.
- Serves as a thought leader in making strategic recommendations on the design and approach for complex data analytic projects.
- Serves as a principal consultant for Judicial Council offices and external stakeholders for data science projects, including identifying and developing statements of business problems, conducting exploratory data analysis, data collection and data mapping, developing model specification requirements, and conducting advanced statistical analyses.
- Promotes new techniques and approaches to continuously review and adapt to external developments; keeps up to date with new machine learning techniques, technologies, architectures, and languages, as needed.
- Provides expert level analytic work products and data visualizations to help judicial branch leadership understand underlying data patterns and trends that could have impact on court business and policy discussions.

- Works with various stakeholders to help frame business problems so that appropriate corresponding data science techniques can be identified and applied.
- Educates and collaborates with Judicial Council office leadership, data science teams, business partners, and Information Technology regarding data analytics related processes, systems, and improvements across various entities branch wide.
- Partners with Judicial Council office leadership and Information Technology staff to select, evaluate, improve, and document tools and systems in order to strengthen analytics robustness and presentation capacity.
- Conveys findings and conclusions of work orally, in writing, visually, and in presentations to communicate effectively with a wide range of audiences including technical and nontechnical staff, stakeholders, and members of the public.
- Manages technical requests with external vendors.
- Performs other duties of a similar nature and level as assigned.

EXAMPLES OF POSITION SPECIFIC RESPONSIBILITIES *(Illustrative Only)*
Responsibilities across incumbents in this classification are covered in the "Examples of Essential Duties" list. While incumbents assigned to this classification may access, maintain, or use function-specific tools and/or perform specific data analysis tasks aligned with one work unit, the general description of the work tasks involved in this class do not vary significantly and therefore no position specific duties are noted.

MINIMUM QUALIFICATIONS

EDUCATION AND EXPERIENCE
Bachelor's degree in statistics, data science, mathematics, computer science, information systems or a directly related quantitative field, and five (5) years of data analysis experience including solid knowledge of, and proficiency in, the tools used in the area of assignment. *An additional four years of professional experience as noted above may substitute for the bachelor's degree. Or, additional directly related experience and/or education may be substituted on a year-for-year basis.*

OR

Master's degree in a directly related field such as statistics, data science, math, computer science, or information systems, and two (2) years of data analysis experience including solid knowledge of, and proficiency in, the tools used in the area of assignment.

OR

One (1) year as a Senior Analyst conducting complex, statistical analysis, survival analysis, and analysis of variance using statistical programs such as SPSS, SAS, and STATA or equivalent, with the Judicial Council of California or one (1) year of experience performing these duties in a class comparable in the level of responsibility to that of a Senior Analyst in a California Superior Court or California state-level government entity.

LICENSING AND CERTIFICATIONS
- None

KNOWLEDGE OF

- Advanced concepts in research and experimental design, and data collection methods;
- Mathematical concepts, statistical analysis, data analytics, forecasting/predictive analytics, multivariate testing, and optimization algorithms;
- The data lifecycle and related data governance concepts and applications;
- Database concepts, big data frameworks (SQL and OLAP extensions), technologies, and utilization;
- Computer languages, such as Python, R, or equivalents;
- Principles and methods of developing and maintaining technical specifications and design documentation;
- Advanced reporting and data visualization tools, such as Power BI and Tableau;
- Machine learning algorithms (clustering, decision trees, neural networks, etc.);
- Principles and methods of database design, management, and tuning;
- Advanced principles and practices of group facilitation and building consensus;
- Applicable federal, state, and local laws, codes, regulations, and/or ordinances;
- Advanced project management methods, tools, and techniques;
- Principles and techniques of preparing effective written documentation and presentations; and
- Problem solving approaches with a focus on business delivery.

SKILL IN

- Using advanced data analysis tools, research design, data collection, coding, languages, and report generators;
- Identifying trends and patterns;
- Interpreting rules, laws, policies, and procedures, and providing consultation to others;
- Translating data and analysis into business insights and predictions;
- Manipulating data and drawing insights from large data sets;
- Clearly communicating complex ideas and concepts in a way that is easily understood;
- Authoring and editing complex reports and documents;
- Analyzing policy and policy development;
- Coaching project teams;
- Applying initiative and creativity to technical problem-solving;
- Providing advanced project/program management, organization, and logistics; managing project or program finances;
- Working effectively under pressure and uncertainty, with multiple deadlines and changing priorities;
- Organizing tasks, meeting deadlines, and prioritizing competing demands within assigned projects; and
- Providing customer service as needed.

WORKING CONDITIONS, ADA, AND OTHER REQUIREMENTS

The Judicial Council is an equal opportunity employer. The Judicial Council will comply with its obligations under the law to provide equal employment opportunities to qualified individuals with disabilities.

Positions in this class typically require: sitting, stooping, kneeling, crouching, reaching, standing, walking, pushing, pulling, lifting, fingering, grasping, talking, hearing, seeing, and repetitive motions.

Sedentary Work: Exerting up to 10 pounds of force occasionally and/or a negligible amount of force frequently or constantly to lift, carry, push, pull or otherwise move objects. Sedentary work involves sitting most of the time. Jobs are sedentary if walking and standing are required only occasionally, and all other sedentary criteria are met.

Incumbents generally work in a typical office environment with adequate light and temperature.
The Judicial Council will make all reasonable efforts to minimize the need for employees to travel by taking advantage of virtual conferencing tools as much as possible. However, positions in this class may require local and statewide travel as necessary.

Please note: *The Judicial Council classifies work based on organizational need. The distinguishing characteristics, essential duties, and minimum qualifications described in this specification relate to the body of work required and not to the attributes of an incumbent assigned to perform the work.*