SANDAG

Data Science and Analytics

As a premier multi-modal planning and project implementation agency, SANDAG relies on the quality and capacity of our Data Science and Analytics, and Economic programs. To help SANDAG achieve its agency objectives, the Data Science and Analytics Department was tasked to formulate actionable and transparent business intelligence strategies and implement valuable initiatives related to big data, open data, data analytics, and economic research.

The Data Science and Analytics Department delivers data services that enhance the San Diego regional economy using descriptive and predictive data to help make informed policy decisions, while using an open data platform to improve transparency and share information with others.

First Review of Applications: November 19, 2021 – opened until filled
Expected Start Date: December 2021

Data Science and Analytics Department Job Openings:

Associate Data Scientist:
The Data Scientist will contribute as a critical team member in the newly established Data Science & Analytics department to develop data-driven analytics applications across the agency and support research efforts.

Associate Data Scientist: $83,513 - $129,446/year

Data Science Intern:

The Data Science Intern is ideal for a student or recent graduate. This position will provide a "hands-on" learning experience in the research/data profession. The Data Science intern will contribute as a team member to the research, collection, and compilation of project and program data; ensure the accuracy of information; assist with the maintenance databases and documentation; assist in the collection and processing of data using a variety of software applications and programs.

Undergraduate or graduate level coursework in business analytics, data science, computer science, economics, statistics, mathematics, or a related field.

Undergraduate-level interns will be paid $15/hour; interns with a bachelor's degree or higher will be paid $18/hour. This is a one-year part-time opportunity working 20-29 hours per week

Candidates selected for these positions will be expected to work in-person in the San Diego office.

Associate Data Scientist - Job Responsibilities and Experience & Qualifications

The Data Scientist will support 5 key agency priority projects: NAVWAR / Central Mobility Hub, Regional Plan, Otay Mesa East Port of Entry, Mid Coast Light Rail, and Del Mar Bluffs research, and will conduct statistical analysis and forecasting related to regional demographics, land use planning, and econometrics and will participate in and coordinate data analytics projects. This position is ideal for someone who enjoys analytical thinking and problem solving who is highly organized, flexible, and can be relied upon to meet deadlines with changing priorities.

Job Responsibilities:

- Perform analysis of large data sets and translate findings into digestible information to help inform various agency projects.
- Research, collect, and compile data; ensure accuracy of information; maintain databases, and documentation.
- Collect and process data using various software applications and programs, develop databases, code data for input, document data files, run programs, identify and resolve data inconsistencies, edit and correct data files.
- Conduct complex research, analysis, maintenance, and improvement of land use forecast models used to support regional transportation planning.
- Participate in Quality Assurance/Quality Control (QA/QC) processes to improve data and modeling qualities; support the improvement of model transparency.
- Develop and maintain custom software applications for current year estimates and long-range forecasts; develop new scripts, enhance existing software, and create new architectures as modeling needs evolve.
- Support and perform ad-hoc requests involving statistical analysis of various data sources and model development using a variety of machine learning algorithms. Determine the data to be used, develop methodology, and write the statistical programming required to generate results.
- Prepare written technical and analytical reports and present findings and recommendations to a variety of audiences, respond to questions and provide feedback.

Qualifications:

- A Bachelor's degree with major coursework in data science, computer science, statistics, economics, mathematics, or other hard science related fields. An advanced degree preferred.
- Three years of recent experience with professional research, programming in a data science domain, quality assurance, data analysis, database management, GIS analysis, mapping, and web application development.

- Experience with relational databases such as SQL Server, including writing queries that transform and summarize data.
- Knowledge of developing algorithms using machine learning and artificial intelligence methodologies.
- Proficiency in programming languages such as Python, Java, R, SQL, and Jupyter notebook in developing large-scale analytics applications.
- Experience with data acquisition and QA/QC methods; experience developing and implementing Extract, Transform and Load (ETL) processes; experience with Hadoop, MongoDB, NoSQL databases, and Azure Data Lake Storage.
- Experience performing complex dataset queries, including developing and maintaining various tests and data strategies for risk identification and highest quality data standards assurance.
- Knowledge of research methods, survey design, and quasi-experimental designs.
- Experience with data visualization tools such as Tableau, Power BI, Plotly, Esri Experience Builder.
- Familiarity with data such as Census, American Community Survey, Bureau of Labor Statistics, and other socioeconomic and demographic data.
- Experience with regional and small area analyses using Esri's suite of GIS software, including feature creation, scripting, mapping, and spatial analytics, familiarity with transportation network coding and management principles is desirable.
- Experience with or knowledge of cloud platforms such as AWS, Azure, or GCP.
- Ability to communicate effectively, both orally and in writing; ability to prepare presentations and reports; ability to write research publications and white papers; ability to effectively communicate technical information to non-technical audiences; ability to work collaboratively with internal and external teams.
- Excellent organizational skills, attention to detail, and ability to maintain a high level of accuracy.

Benefits and Salary

Our benefits include health, dental, and vision insurance as well as employee assistance, wellness, and work/life balance programs. Retirement and financial security benefits are provided through a pension plan and contribution to the SANDAG deferred compensation program. SANDAG offers flexible work schedules and employees are provided with paid time off and paid holidays. The candidate selected for this position will be expected to work in-person in the San Diego office.

How to Apply

Interested candidates may apply for this position by completing a SANDAG Employment Application.

The Employment Application can be downloaded from the SANDAG website or by contacting hr@sandag.org or calling (619) 699-1900. See our Careers / How to Apply webpage for additional information.

In compliance with the Americans with Disabilities Act (ADA), SANDAG will accommodate persons who require assistance in order to apply for a position at SANDAG. Applicants requiring an accommodation due to a disability during any stage of the recruitment and selection process, including requesting this document and related application materials in an alternative format, should make their needs known by contacting Human Resources at hr@sandag.org, (619) 699-1900, (619) 699-1904 (TTY), or fax (619) 699-6905.

Further Information

In compliance with the Immigration Reform and Control Act of 1986, applicants hired by SANDAG must show acceptable proof of identity and evidence of authorization to work in the United States.

The selected candidate can anticipate a driving record check upon hire, and approximately annually thereafter. The results of the check may determine whether the selected candidate will be permitted to drive for SANDAG business.

SANDAG requires all new employees to be fully vaccinated for COVID-19 within 45 days of hire; reasonable accommodation requests will be considered.

Contact Us

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SANDAG is an Equal Opportunity Employer