



COOK COUNTY
**ASSESSOR'S
OFFICE**

DIRECTOR OF DATA SCIENCE

Department: Data
Grade: 23
Hiring Process Shakman Exempt

Job Code: 9509
Shakman Status: Exempt
FLSA Status: Exempt

Job Summary

Reporting directly to the Deputy Assessor - Chief Data Officer (CDO), the Director of Data Science supervises and directs the Data Science unit within the Data and Modeling Department. The Director of Data Science oversees and is responsible for the application of advanced mathematical and statistical concepts to assess real estate. The Director of Data Science constructs predictive models, algorithms, and tooling to support data analysis and verifies model and algorithm effectiveness based on real-world results.

The Director of Data Science also participates in the policy-making process by producing data-informed policy recommendations and prescriptive analyses. The Director of Data Science supervises and manages the workflow of direct reports, identifies and resolves issues or bugs with processes and scripts, identifies opportunities to improve processes and scripts, identifies potential new sources of low-cost data, and otherwise supports the CDO, as needed.

Essential Job Duties

- Works with CDO to develop and refine coding, management, and data protocols.
- Assists CCAO staff in leveraging data assets in the execution of their duties.
- Explores opportunities to gather or create new data valuable to staff or the public.
- Determines technical and project priorities within the Data Department.
- Manages Data Science employees, fellows, and interns.
- Leads the development and maintenance of code bases that perform a wide range of production and analytics tasks.
- Manages complex engagements and interfaces with CCAO staff to deliver data science projects that provide improvements to CCAO efficiency, transparency, and fairness.
- Manages data collection, cross-channel data integration, predictive analytics, reporting, dashboards, and data visualization.
- Collaborates with senior-level staff to develop strategies to identify and pursue opportunities to use data science within the CCAO to improve services.
- Manages relationships with external parties, such as academic researchers, pro

bono consultants, and university students to help develop new projects.

- Leverages data to develop performance indicators for critical internal CCAO processes and communications with external stakeholders.
- Leads the development and maintenance of data infrastructure that supports Department tasks such as modeling, reporting, tooling, and exploratory analysis.
- Assists the CDO to operate across organizational and computing "silos" to drive common approaches and expose information assets and processes across the enterprise.
- Assists the CDO to work with the Deputy Assessor - Chief Information Officer, architecture, database administrators, leadership, and County departments to evaluate and select appropriate database technologies and platforms.
- Assists the CDO to oversee existing databases, including backups.

The duties described above are not set forth for purposes of limiting the assignment of work. They are not to be construed as a complete description of the many duties normally to be performed under a job title or those to be performed temporarily outside an employee's normal line of work.

Minimum Qualifications

- Graduation from an accredited college or university with a bachelor's degree or higher in data science, statistics, computer science, information science, mathematics, economics, or related field.
- Five (5) years of work experience in data science, data engineering, or technical operational teams managing the technical process and operational integrity of project and services.
- Three (3) years of supervisory experience.

OR

- Graduation from an accredited college or university with a bachelor's degree or higher.
- Seven (7) years of work experience in data science, data engineering, or technical operational teams managing the technical process and operational integrity of project and services, with one (1) year full-time work experience testing and deploying machine learning models.
- Three (3) years of supervisory experience, with at least one (1) year of work experience supervising data scientists.

Preferred Qualifications

- Master's degree or higher in data science, statistics, computer science, information science, mathematics, economics, or related field.

Knowledge, Skills, and Abilities

- Knowledge of and ability to consistently interpret and apply CCAO policies, procedures, practices and guidelines or the ability to gain such knowledge.
- Knowledge of CCAO's operations, function, procedures, activities and the property tax system, or the ability to quickly gain such knowledge.

- Competency in the following foundational skills:
 - Programming in R, SQL, Python or other similar procedural languages.
 - Exploring data visually
 - Mapping data, particularly using geographic information systems (GIS)
 - Database schema design
 - Linking datasets
 - Building and operating ELT (extract, load, transform) systems for data management
- Familiarity with federal, state, or local government operations.
- Knowledge of strategic technology planning and execution, and policy development and maintenance.
- Ability to describe business use cases/outcomes, data sources and management concepts, and analytical approaches/options.
- Excellent oral and written communication skills, including the ability to explain technical concepts and technologies to business leaders, as well as business concepts to technologists.
- Excellent business acumen and interpersonal skills and the ability to work across business lines at senior levels to influence and effect change to achieve common goals.
- Outstanding analytical and problem-solving abilities.
- Ability to script complex, object-oriented and procedural scripts in R.
- Ability to meet CCAO and Departmental deadlines, production goals, and effectively utilize time with limited oversight.
- Ability to work with others and excellent interpersonal skills in dealing with elected officials, the public, co-workers, and staff.

Physical Requirements

- Visual acuity to review and edit written communications for long periods of time.
- Walking between offices and buildings may be required.
- Repetitive use of hands to handle and/or operate standard office equipment.
- Regular use of a telephone to communicate.

COOK COUNTY ASSESSOR'S OFFICE IS AN EQUAL OPPORTUNITY EMPLOYER

Last modified: March 20, 2025