CLASS TITLE: CHIEF FORENSIC DATA ANALYST

CHARACTERISTICS OF THE CLASS

Under direction, plans and directs the activities of the Analytics Section in the Office of the Inspector General (OIG), and performs related duties as required

ESSENTIAL DUTIES

- Directs staff engaged in data oriented analysis, business and exploratory analytics utilized to support Citywide investigations

- Leads and performs advanced analysis by developing statistical models and techniques to evaluate large, complex, operational data from varying sources

- Directs the use of predictive analytics to leverage data for decision making

- Oversees large-scale projects including managing timelines, providing technical assistance to team members in extracting and analyzing complex data and apprising management of project status

- Evaluates performance of subordinate staff and makes recommendations for disciplinary action

- Provides direction in statistical techniques to transform data into information to develop investigative leads, validate assumptions, and decipher underlying trends and patterns indicative of fraudulent or inefficient programs

- Oversees the evaluation and design of reports, informational graphics and visual aids to inform stakeholders of issues impacting the City

- Compiles large data sets for statistical models, trends, predictions, and analyses that enable departments to develop cases, conduct citywide program reviews and audits, and/or monitor citywide hiring practices

- Develops and integrates innovate techniques for data mining and exploratory analytics resulting in the extraction of critical information

- Plans and allocates resources across different departmental initiatives related to data mining and analysis

- Keeps abreast of new or emerging data analytics trends and best practices and recommends changes to departmental policies and procedures as appropriate

NOTE: *The list of essential duties is not intended to be inclusive; there may be other duties that are essential to particular positions within the class.*

MINIMUM QUALIFICATIONS

Education, Training, and Experience

- Graduation from an accredited college or university with a Master's degree or higher in Data Analytics, Statistics, Mathematics, Economics, Computer Science, or Information Technology/Systems, or a directly related field, plus five (5) years of work experience in data analysis or data management, of which two (2) years are in a supervisory role related to the responsibilities of the position

Licensure, Certification, or Other Qualifications

- None

WORKING CONDITIONS

- General office environment

EQUIPMENT

- Standard office equipment (e.g., telephone, printer, photocopier, fax machine, calculator)
- Computers and peripheral equipment (e.g., personal computer, computer terminals, hand-held computer)

PHYSICAL REQUIREMENTS

- No specific requirements

KNOWLEDGE, SKILLS, ABILITIES, AND OTHER WORK REQUIREMENTS

Knowledge

Comprehensive knowledge of:

- *methods and techniques of data design, analysis and management
- *methods and techniques of predictive analytics
- *programming logic and languages, data manipulation and integrated environments
- *research methods, techniques and procedures
- *applicable computer software packages

Considerable knowledge of:

- *data mining processes and tools
- *data query, analysis and reporting

Moderate knowledge of:

- *management and supervisory methods, practices, and procedures

Knowledge of applicable City and department ordinances, policies, procedures, rules, regulations, and ordinances

Skills

- *ACTIVE LEARNING - Understand the implications of new information for both current and future problem-solving and decision-making
- *ACTIVE LISTENING - Give full attention to what other people are saying, taking time to understand the points being made, ask questions as appropriate, and not interrupt at inappropriate times
- *CRITICAL THINKING - Use logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions, or approaches to problems
- *COMPLEX PROBLEM SOLVING - Identify complex problems and review related information to develop and evaluate options and implement solutions
- *SYSTEMS ANALYSIS - Determine how a system should work and how changes in conditions, operations, and the environment will affect outcomes
- *PROGRAMMING - Write computer programs for various purposes
- *QUALITY CONTROL ANALYSIS - Conduct tests and inspections of products, services, or processes to evaluate quality or performance

- *TECHNOLOGY DESIGN – Generate or adapt equipment and technology to serve users needs

Abilities

- COMPREHEND ORAL INFORMATION - Listen to and understand information and ideas presented through spoken words and sentences
- SPEAK - Communicate information and ideas in speaking so others will understand
- COMPREHEND WRITTEN INFORMATION - Read and understand information and ideas presented in writing
- WRITE - Communicate information and ideas in writing so others will understand
- REASON TO SOLVE PROBLEMS - Apply general rules to specific problems to produce answers that make sense
- MAKE SENSE OF INFORMATION - Quickly make sense of, combine, and organize information into meaningful patterns
- REASON MATHEMATICALLY – Choose the right mathematical methods or formulas to solve a problem
- ANALYTICAL THINKING - Analyze information and using logic to address work or job issues and problems
- COMPARE AND RECOGNIZE DIFFERENCES - Quickly and accurately compare similarities and differences among sets of letters, numbers, objects, pictures, or patterns (includes comparing a presented object with a remembered object)
- ORGANIZE INFORMATION - Arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations)
- REACH CONCLUSIONS – Combine pieces of information to firm general rules or conclusions

Other Work Requirements

- INITIATIVE - Demonstrate willingness to take on job challenges
- LEADERSHIP – Demonstrate willingness to lead, take charge, and offer opinions and direction
- ADAPTABILITY/FLEXIBILITY - Be open to change (positive or negative) and to considerable variety in the workplace
- DEPENDABILITY - Demonstrate reliability, responsibility, and dependability and fulfill obligations
- ATTENTION TO DETAIL - Pay careful attention to detail and thoroughness in completing work tasks
- INNOVATION - Think creatively about alternatives to come up with new ideas for and answers to work-related problems

All employees of the City of Chicago must demonstrate commitment to and compliance with applicable state and federal laws, and City ordinances and rules; the City's Ethics standards; and other City policies and procedures.

The City of Chicago will consider equivalent foreign degrees, accreditations, and credentials in evaluating qualifications.

* May be required at entry.