Classification: Research Analyst I

Title Code: V00434

Pay Range: 18

POSITION SUMMARY: This is an entry-level position where the employee conducts research and provides statistical and analytical support to crime and traffic safety authorities from Patrol components, state agencies, legislators, advocacy groups, and the general public. Utilizing various databases maintained by the Patrol, and various agencies, the employee will develop, analyze and interpret reports, spreadsheets, graphical displays, and dashboards that provide information and insight into Missouri's crime and crash trends, and various requests for data insight. Work is performed under general supervision.

DESCRIPTION OF DUTIES PERFORMED (Any one position may not include all of the duties listed nor do the listed examples include all tasks which may be found in positions of this class.):

Uses descriptive statistics, predictive analytics, machine learning, and other methods to learn about and derive insights from the patterns and relations within datasets to produce annual and ad hoc reports.

Assists with developing intuitive graphics utilizing a wide range of data visualization tools (e.g., ArcGIS, Tableau, etc.).

Uses inferential statistics to learn about the causal relations between variables in a dataset.

Assists with obtaining, merging, reshaping, cleaning, and evaluating the quality of datasets.

Utilizes Geographical Information System software to analyze and visualize desired data elements.

Accesses data utilizing various methods including, but not limited to, Structured Query Language (SQL) databases.

Assists with creating and maintaining statistical websites.

Assists with the statistical analyses of data for internal and external stakeholders regarding various information requested (e.g., crash data, crime data, staff modeling studies, etc.).

May provide key information and liaison services to various agencies.

Performs other related work as assigned.

REQUIRED KNOWLEDGE, SKILLS, AND ABILITIES: Knowledge of and the ability to utilize statistical programming languages (e.g., R, Python, Stata, Statistical Package for the Social Sciences (SPSS), etc.).

Knowledge of and the ability to utilize complex datasets, including importing, merging, and reshaping datasets.

Knowledge of and the ability to identify duplicates, discrepancies, missing entries, and other elements of large data.

Knowledge of and the ability to utilize SQL databases.

Knowledge of and the ability to utilize research designs, methodologies, statistical concepts, and sampling strategies.

Knowledge of and the ability to utilize computer word processing, spreadsheet, presentation, and graphics software.

Knowledge of the agency's functions and inter-relationships.

Possess analytical and interpretative skills to relate data collection forms, specifications, and code files.

Possess excellent communication skills, to include proper and effective use of grammar, punctuation, and sentence structure.

Ability to work as a team member and positively interact with a variety of people, including administrative staff, employees, and the general public.

Ability to enter and extrapolate statistical data with appropriate databases and prepare reports.

Ability to learn the Patrol's applicable computer systems and policies.

Ability to research topics with a high degree of resourcefulness.

Ability to communicate well with individuals having many levels of technical knowledge.

Ability to work on many tasks simultaneously, while maintaining good organizational skills.

Ability to work independently.

Ability to handle restricted and confidential information in a professional manner and maintain the information as such.

Ability to operate basic office equipment, as detailed in the description of duties.

Ability to communicate in English clearly and concisely, both orally and in writing.

Ability to establish and maintain harmonious working relations with others.

Ability to work with material that may be of a sexual nature relating to criminal activity (e.g., written material, photographs, and/or verbal language, etc.).

Ability to work hours as assigned.

MINIMUM EXPERIENCE AND EDUCATION REQUIRED (The following represents the minimum qualifications used to accept applicants, provided that equivalent substitution will be permitted in case of deficiencies in either experience or education.):

Possess a bachelor's degree from an accredited four-year college or university in Mathematics, Statistics, Criminal Justice, Information Technology, or related field. Coursework must include at least three credit hours in statistics.

Preference may be given to those possessing experience and/or certification (s) in research methodology, statistical analysis utilizing ArcGIS, or programming languages such as R, Python, Stata, SPSS, SQL, etc.

FLSA STATUS: Non-Exempt

WORK SCHEDULE: An employee in this position works an eight-hour shift as directed; however, working hours are subject to change at the discretion of the commanding authority.