DOUGLAS COUNTY
SHERIFF'S OFFICE

JOB TITLE: SENIOR SOFTWARE ENGINEER (SO)

Exempt: Yes	**Job Type**: 7324T
Pay Grade: T730	**Department**: Office of the Sheriff
Approved/Reviewed by: Sheriff Darren Weekly	**Date:** 01-10-23

General Duties: The Senior Software Engineer will be responsible for leading the analysis, software design and architecture, development, unit testing, maintenance, and support of Douglas County Sheriff's Office business applications.

Supervision Received: Reports directly to the Public Safety Technology Manager.

Supervision Exercised: This position has no direct supervisory responsibility over other positions, although the position is responsible for providing mentoring of less experienced Technical Staff. In addition, the incumbent will be responsible for providing technical leadership on the deployment and support of operationally based projects.

Examples of Duties and Responsibilities: (The following examples are illustrative only and are not intended to be all-inclusive.)

- Acts as a technical leader in a team-based environment.
- Provides direction and mentoring to less experienced developers, assisting them in resolving technical issues and applying best practices.
- Evaluates platforms, software libraries, development tools, and processes and makes recommendations that will improve the team's effectiveness and capabilities.
- Develops and communicates best practices covering development technologies, implementation patterns, integration techniques, design options and application security.
- Designs and develops software, which meets the requirements of the business in an effective, sustainable, and reliable manner.
- Unit tests developed against software prior to formal testing by the Quality Assurance staff.
- Adheres to established Douglas County best practices, standards and agreed upon design patterns for application development, application design, user interfaces, integration, naming, and testing.
- Analyzes and understands business users' requirements, clarifying inconsistencies, conflicts, or ambiguities, to effectively model business processes in software.
- Documents software designs, applications support requirements, application configuration information and CJIS requirements as required.
- Corrects identified bugs encountered through the development and support processes in both the unit testing process and the formal Quality Assurance process.
- Integrates custom and commercial off-the-shelf software in an effective, sustainable, and reliable manner.

- Develops enterprise-level, re-usable software components to create opportunities for faster response to business needs and to reduce the overall cost of future development.

Other Duties: Performs other duties as assigned

Education and/or Experience: Generally, a bachelor's degree in Computer Science, Computer Information Systems or a closely related field and a minimum of 8 years of experience in designing, developing, and testing applications developed in a mainstream object-oriented language. Sufficient experience may be substituted for a degree.

Minimum of 6 years of experience in software development in the following:
- Experience with full stack software engineering including languages such as C# and Java.
- Experience with relational databases such as Microsoft SQL Server, Oracle or MySQL including intermediate to advanced queries, database design.

Minimum of two years of experience in the following:
- JavaScript and JavaScript frameworks (e.g., React, Angular or Vue) Experience.
- Consuming, designing, and implementing public and authenticated APIs (RESTful and SOAP, gRPC nice to have).
- History of working with relational, and non-relational databases.
- Experience leading development projects, gathering requirements, making architectural and design decisions for software and infrastructure suggestions.
- Porting legacy Java applications to modern full stack frameworks.
- Project management methodologies.

Additional desired experience:
- Experience with Docker or Kubernetes.
- Understanding of Unit testing, Test-Driven Development, and mocking frameworks.
- Understanding of continuous delivery principles and processes.
- Proclivity towards refactoring and continuously improving OO code through agile development methods.
- Experience with oAuth2, OpenID Connect, Active Directory.
- Exposure to Azure, AWS or GCP cloud services platforms.
- DevOps experience including setting up development and production environments, installing packages, deploying code, shell scripting and automating tasks.
- Experience with a low code platform is preferred.
- UI and UX best practices.
- Self-starter with experience in a less structured environment.

Certificates, Licenses, Registrations: Must possess a valid Colorado driver's license. A+ certification and other computer-related certificates are helpful.

Contacts: This position has regular contact with Douglas County Sheriff's Office staff, County IT, and vendors.

Independent Judgment: Work is performed independently within general guidelines. The ability to seek guidance at appropriate times is required.

Essential Job Functions:

Language Skills: Position requires the ability to effectively communicate in both oral and written form, document technical processes and procedures, document business requirements, and establish and maintain effective working relationships.

Computer Skills**:** Must be highly proficient with Windows PC operating systems, network infrastructure, application/system administration, application deployment, application, and database reporting tools.

Reasoning Ability: Position requires the ability to apply common sense understanding to carry out instructions, as well as to deal with complex technical data and systems. Ability to conceive and implement workflows is required.

Other Skills and Abilities: Position requires a high-level of law enforcement knowledge. Position requires strong computer skills and an understanding of program design, implementation, and testing procedures. Ability to deal with confidential information. Ability to remain calm and effectively communicate under adverse conditions. Ability to deal with high stress job. Ability to interact effectively and professionally with the broad range of individuals encountered in a public safety environment.

Physical Demands: May occasionally be required to lift and/or move up to 40 pounds. Ability to bend, kneel and crawl under desks and tables as necessary.

Work Environment: Work is generally performed in a typical office environment. Some local travel is required. Ability to work beyond scheduled hours and respond to after hour pager/calls in a time critical manner is required. A Sheriff's Office background check and fingerprint check is required.

Consequence of Error: Work involves complex analysis of Computer Aided Dispatch, Records Management, Mobile, Investigations, Field Reporting, Jail Management, and other business functions. Consequences of error may include inaccurate reporting, financial liabilities, inaccurate communications, and non-compliance with state and federal statutes.

Testimony: Must be able to provide credible testimony in a court of law or any other legal proceeding or investigation.

Other: In the event of an emergency/disaster in or near the County, all County employees are expected to make every effort to be available to assist the County Manager, Elected/Appointed Officials and Department Directors to ensure the continued operation of any and all necessary County functions. This may mean being available to perform additional duties and hours beyond what is normally required. In the event that an exempt employee does work more than 40 hours a week in support of County operations during an emergency, such employee may receive overtime

or other appropriate wage compensation in accordance with existing County policies or at the discretion of the County.