

# FRESNO COUNTY SUPERINTENDENT OF SCHOOLS

## CLASSIFIED POSITION<sup>1</sup>

JCN: 426  
RANGE: 169  
EXEMPT

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### SOFTWARE ARCHITECT

#### **BASIC FUNCTION:**

Under the direction of the Director of Application, Development and Support or assigned supervisor, lead the design and development of large-scale data applications; provide specialized and highly complex expertise in the design, build, development, technical evaluation, and testing of a large-scale enterprise business system that includes, but is not limited to, financial, budgeting, payroll, purchasing, business intelligence, and human resources functions for the County Superintendent and school districts.

#### **REPRESENTATIVE DUTIES:**

#### **ESSENTIAL DUTIES:**

- Oversee development team in performing a variety of specialized duties in the design, programming, development, maintenance and analysis of computer applications and databases; communicate all concepts and guidelines to development team; provide technical guidance and coaching to developers and engineers; coordinate project assignments and establish timelines; oversee progress of development team to ensure consistency with initial design.
- Analyze and interpret functional requirements into design, development and implementation of software solutions.
- Contribute to the creation, implementation, communication, and on-going support of application level development and integration standards and processes.
- Develop high-level product specifications with attention to system integration and feasibility.
- Define all aspects of development from appropriate technology and workflow to coding standards.
- Define product requirements and create high-level architectural specifications, ensure feasibility, functionality, and integration with existing systems and platforms.
- Define system and other non-functional requirements for assigned projects.
- Design major aspects of the architecture of an application, including components such as user interface, middleware and application infrastructure.
- Develop and maintain supporting documentation for applications, reports, and procedures.
- Ensure software meets all requirements of quality, security, modifiability, extensibility etc.
- Ensure solutions are sustainable, secure, scalable and offer flexibility for future growth.
- Perform a variety of specialized duties in the programming, development, maintenance and analysis of computer applications and databases.
- Perform hands-on solution design, solution architectures, database architecture, road maps, prototyping, proof-of-concepts and development tasks as required in support of current and new projects.
- Performing architecture and code reviews; ensure uniform enterprise wide application design standards are maintained.
- Present solutions at formal and informal design reviews, document and design accordingly.
- Provide technical development plans for assigned work breaking into manageable tasks and estimating effort.
- Provide technical guidance and leadership to other application developers or software architects.
- Use tools and methodologies to create representations for functions and user interface of desired product

<sup>1</sup>Unrepresented

- Utilize design and development tools; design concepts; interpret project specifications; prepare design documents; meet usability requirements and interpret project specifications.
- Work with an Agile (SCRUM) development approach.
- Work with users to understand needs, then elicit feedback and refine solutions through demonstrations.
- Establish and maintain contact with users in the analysis of computer systems and procedures and determination of program feasibility and development; analyze requests for application additions and revisions; confer with users to determine software requirements and desired output, resolve problems and provide support and assistance.
- Oversee and participate in the research, design, development and implementation of new system applications; modify existing programs to enhance database operations and functions.
- Attend and participate in a variety of assigned meetings, committees, conferences, in-services and/or special events.
- Comply with schedules, policies, regulations, procedures, orders and directives of the County Superintendent.
- Exhibit professionally appropriate interpersonal skills including but not limited to tact, patience, flexibility and courtesy.
- Maintain a safe work environment.
- Operate a variety of office equipment, including but not limited to a computer, assigned software applications servers, peripherals and specialized software.
- Serve as a liaison between County Superintendent and administrators, personnel, outside organizations or the public concerning assigned area.
- Serve as a technical resource concerning assigned program, function or instructional area.
- Work collaboratively and maintain effective working relationships with others in the course of work in assigned area.

#### OTHER DUTIES:

- Drive a vehicle to conduct work, using own transportation.
- Perform related duties as assigned.
- Travel may be required in and outside of California.
- Work a flexible work schedule as required.

#### KNOWLEDGE AND ABILITIES:

##### KNOWLEDGE OF:

- Database structures, web-based applications and system capabilities of county office computer systems.
- Microsoft Office Suite (Word, Excel, Power Point & Access).
- Multi-platform client server applications.
- Policies and objectives of assigned tasks, stories, and applications.
- Principles, practices and techniques of software engineering and system design.
- Principles, practices and techniques used in the development, maintenance and analysis of computer systems, databases and applications.
- Record-keeping and report preparation techniques.
- Software programming systems, applications and languages utilized by the county office.
- Techniques for testing and debugging software applications.
- Technology advances in applications of expertise.
- User interface standards and design concepts.
- Utilizing modern development tools such as ASP.Net, WCF, XML, VB.NET, C++, JavaScript, JQuery, AJAX, CSS, HTML, HTML5, XML, AngularJS, and SQL.

- Proper English usage, grammar, spelling, punctuation and vocabulary in all forms of communication.
- State Education Code, local, state and federal laws, codes, regulations and requirements and county office organization, operations, policies and objectives as related to assigned activities and/or instructional area.
- Theoretical and technical aspects of field of specialty.

#### ABILITY TO:

- Design applications to meet county office needs, enhance technology performance and provide for system enhancements.
- Design programming solutions, troubleshoot, and resolve application defects.
- Develop and implement source code for new and existing software applications.
- Facilitate the computerized collection, management, manipulation, and distribution of data used for analysis.
- Integrate new software and revise existing applications to ensure compatibility with existing computer systems.
- Maintain records and prepare reports.
- Meet schedules and timelines.
- Modify existing programs to enhance database operations and functions.
- Operate computers and peripheral equipment properly and efficiently.
- Perform a variety of specialized duties in the programming, development, maintenance and analysis of computer applications, databases, and systems in support of assigned systems, programs and functions.
- Prepare, organize, document, and control source code revisions to new and existing applications and features using standard source control systems such as Team Foundation.
- Research, design, develop and implement new system applications as appropriate.
- Understand legacy code sufficient to reengineer new applications.
- Analyze and evaluate situations accurately and adopt an effective course of action.
- Communicate effectively both orally and in writing.
- Drive a vehicle to conduct work.
- Interpret, apply, and explain rules, regulations, policies and procedures.
- Maintain consistent, reasonably regular, punctual attendance consistent with federal, state and local standards.
- Safely and successfully perform essential job functions consistent with federal, state and local standards, including meeting qualitative and/or quantitative productivity standards.
- Work confidentially and with discretion.
- Work independently with little direction.

#### **EDUCATION AND EXPERIENCE:**

##### EDUCATION:

- High School Diploma, General Education Degree (GED) or State High School Proficiency certificate.
- Bachelor's Degree in computer science or related field preferred.

##### EXPERIENCE:

- Five years of increasingly responsible experience in software development and database design.

**LICENSES AND OTHER REQUIREMENTS:**

- Valid California driver's license; when driving for work, maintain automobile liability insurance in accordance with California Insurance Code section 11580.1 or maintain other statutorily authorized financial responsibility. .
- Enrollment in the California Department of Motor Vehicles Government Employer Pull Notice Program at time of hire and throughout employment with County Superintendent.

**WORKING CONDITIONS:****ENVIRONMENT:**

- Drive a vehicle to conduct work, using own transportation.
- Office environment.
- Regular interruptions.
- Small and large group meetings.

**PHYSICAL DEMANDS:**

- Bending at the waist, kneeling or crouching; climb or balance.
- Eyesight corrected or uncorrected sufficient to read a variety of materials including but not limited to fine print.
- Hearing with or without use of hearing aid(s) sufficient to hear any conversation with others; understandable voice and speech patterns.
- Manual dexterity and coordination sufficient to operate office and/or classroom equipment.
- Sitting, standing and/or walking for extended periods of time.
- Use hands to handle and/or feel; reach with hands and arms.
- Must frequently lift, push, pull or carry up to ten (10) pounds and occasionally lift and/or move up to twenty-five (25) pounds.

The physical demands and working conditions described here are representative of those that must be met by an employee to successfully perform the essential functions of this position, subject to reasonable accommodation.

*This position description may not be an exhaustive list of all duties, knowledge, or abilities associated with this classification, however it is intended to accurately reflect the principal job elements. Related duties, knowledge, or abilities to those expressly stated may also be required for successful performance of the position.*

**APPROVED:**

Effective: October 1, 2017