Information Technology Systems Analyst

Definition

Under general supervision, plans, develops, coordinates, implements, and supports the activities and operations related to the Agency's technology program including developing and maintaining a variety of complex applications for the multi-user and server-based computer systems, network, website, desktop applications, transportation applications, and the SmartCard system; develops, maintains, and coordinates a variety of local and regional transit technology application programs; provides desktop and application support; installs and maintains computer operating system and applications software; performs a variety of complex technical duties in the installation, repair, replacement, and maintenance of computer hardware and software; and does related work as required.

Distinguishing Characteristics

This single-position classification has primary responsibility for ensuring the maintenance of the Agency's computer system and associated applications and the development and maintenance of a variety of local and regional transit applications. It is characterized by its use of independent judgment and discretion, a strong technical background, ability to work independently, and the ability to make and apply technical programming decisions.

Typical and Important Duties

Duties may include, but are not limited to, the following:

- Tests, evaluates, recommends the purchase of, and installs software that provides internet monitoring capabilities by individual IP ensuring it is locally configurable for security and confidentiality; may develop an in-house application if no suitable commercially available application can be purchased and modified at a reasonable cost.
- Researches, analyzes, and evaluates computer hardware and software for desktop and network compatibility; confers with vendors; defines and documents server and hardware and software requirements, recommends procurement of computer equipment and software.
- Develops, programs (writes code for), and installs an automated process that delivers very large quantities of both resolved and unresolved transit ridership data from a proprietary software to a separate and protected FTP site on a daily basis for access by agencies outside the Agency.
- Develops the architecture, designs, programs (writes code for), and maintains the Agency website that allows for updating as new graphic designs are generated from the current branding and marketing effort including adding supplementary content and features.

- Develops, programs (writes code for), and installs an import tool from Speedinfo Speed sensors that graphically displays and refreshes the information from remote highway radar sensors.
- Oversees SmartCard network ensuring systems are properly sending and receiving data; processes data exceptions; troubleshoots issues; maintains SmartCard network of computers, including maintenance of bus depot computers, point of service systems, and backend computers; performs regular maintenance; makes repairs; modifies/rewrites Smartcard control data and test system functionality for accuracy on buses as well as point of purchase locations.
- Participates in developing functional specifications for Smartcard point of purchase upgrades that include modifications to source codes that enable old applications to function within a new operating system environment and adapt to new firmware provided by third party vendors.
- Develops and administers disaster recovery procedures and backup systems; researches, tests, evaluates, recommends, procures, and implements off-site back-up and disaster recovery systems.
- Researches, tests, and remedies encoding failures manifesting as "values not added" to Smartcards within the system, requiring deep source code analysis to reveal the exact conditions which resulted in the failure and eventual remedy.
- Develops an export interface from proprietary software for ADA certification which protects the database from intrusion while allowing the export of specific client information to a separate proprietary software at a remote location.
- Coordinates and administers single-user, multi-user, and server-based computer systems, as well as transit fare and passenger software systems; installs and maintains operating systems and applications software; maintains network infrastructure, checking space requirements, backups, and network congestion.
- Implements goals, objectives, policies and priorities for services and activities related to the computer system, including security and system design.
- Installs, upgrades, repairs, and monitors equipment and software, interfaces computers to related peripheral equipment, including printers, hubs, routers, and other network devices; resolves complex problems with computers, printers, servers, software, peripherals, and other related equipment.
- Administers and coordinates user access and control; installs, maintains, and deletes users; assigns user rights.
- Prepares written documentation on systems and procedures.
- Identifies opportunities for service delivery improvements; analyzes and evaluates techniques for the implementation of new computer applications, hardware, and peripheral equipment.
- Acts as a liaison with employees to define technical and operational requirements; provides assistance and problems resolution related to computer hardware, software, and associated peripheral equipment.
- Trains staff in a variety of applications, addressing adult learner needs and concerns.
- Performs related duties and responsibilities as assigned.

Experience and Training

Any combination of experience and training that would provide the required knowledge, skills, and abilities would be qualifying. A typical way to obtain the knowledge, skills, and abilities would be:

Experience: Three years of progressively more responsible demonstrated hands-on experience developing, programming, and maintaining computer application systems as well as administering single-user, multi-user, and server-based computer systems.

Training: An associate's degree from an accredited college with major coursework in computer science or a related field.

Job-Related Qualifications

Knowledge of:

- Principles of data processing, computer networking, and voice technology.
- Principles and techniques of the full software development cycle, including analysis, design, coding, testing, implementation, and training.
- Various applicable programming languages.
- Current technology and implementation techniques of computer systems; Microsoft Windows-XP, NT workstation, Intel-based personal computer hardware.
- A variety of simple to complex software, including transportation-related software and Microsoft Office Suites.
- Equipment used in the installation, maintenance, testing, and repair of computers.
- Current technology in the areas of microcomputer hardware and software.
- Research techniques, methods, and procedures.
- Training principals, practices, and techniques for adult learners.

Ability to:

- Analyze informational requirements and needs, identify problems, examine alternatives, reason logically, and design implementation procedures.
- Develop, revise, program, install, and utilize automated systems and procedures.
- Effectively coordinate all aspects of the computer systems.
- Stay current with new technological developments.
- Analyze current and future computer requirements and needs.
- Communicate effectively in writing, orally, and with others to assimilate, understand, and convey information, in a manner consistent with job functions.
- Acquire a thorough knowledge of applicable Agency policies.
- Provide technical advice and consultation to ensure efficient computer utilization.
- Provide instruction and training to non-technical staff.
- Analyze data and develop logical solutions to problems.
- Recommend appropriate revisions to processes and procedures.
- Use initiative, discretion, and sound independent judgment within policy and procedural guidelines.
- Prepare clear and effective reports, correspondence, informational materials, policies, procedures, policies, and other written materials.
- Establish and maintain effective relationships with those contacted in the course of the work.

- Organize own work, set priorities, meet critical deadlines, and follow-up on assignments with a minimum of direction.
- Represent the Agency effectively in contacts with elected and foreign officials, representatives of other agencies, staff, and the public.
- Work in a safe manner following correct Agency safety practices and procedures.
- Maintain confidentiality regarding sensitive information.

Skill in:
- Using a personal computer and associated applications.
- Operating various desktop and host computer equipment.

Licenses and Certificates

All licenses and certificates must be maintained as a condition of employment.
- A valid appropriate California driver's license may be required.
- Maintain a satisfactory driving record.
- MCSE Certification highly desirable.

Special Requirements

Essential duties require the following physical skills, abilities, and work environment:

Physical Skills: Able to use standard office equipment, including a computer and other electronic equipment; arm, hand, finger, wrist, leg, or foot motion repetitively; firmly or lightly grasp items as needed; sit, stand, walk, kneel, and maintain sustained posture in a seated or standing position for prolonged periods of time; vision to read printed materials, a computer screen, and to work in a typical office environment; distinguish among various colors; distinguish various computer generated auditory signals; use common hand tools; hearing and speech to communicate in person, over the telephone, and to make public presentations; lift and carry 50 pound boxes, files, and materials 50 pounds.

Ability to: Travel to different sites and locations; drive safely to different sites and locations; work protracted and irregular hours and evening meetings or work unusual hours for meeting attendance or participation in specific projects or programs.

Work Environment: Mobility to work in a typical office setting and to periodically work in a field setting.

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Former Titles:	
Status:	Exempt/Mid-management
ADA Review:	
DOT:	No
Physical:	No