



Software Solutions Engineer Job Description

As a Software Solutions Engineer, you will be responsible for designing, developing, testing, and deploying software solutions. This includes creating APIs and distributed systems, setting up continuous development gates, and integrating technologies. You will work with a distributed team, engaging with stakeholders and customers to ensure high-quality, secure, and scalable solutions.

Position Details

Position Status: Full-time, exempt employee

Position Location: Flexible in the United States

Reports to: Director of Engineering

Who We Are

Credential Engine is a non-profit whose mission is to map the credential landscape with clear and consistent information, fueling the creation of resources that empower people to find the pathways that are best for them.

We envision a future where millions of people worldwide have access to information about credentials that opens their eyes to the full range of opportunities for learning, advancement, and meaningful careers. For more information, visit www.credentialengine.org.

What We Do

Credential Engine provides a suite of web-based services that creates for the first time a centralized Credential Registry to house up-to-date information about all credentials, a common description language to enable credential comparability, and a platform to support customized applications to search and retrieve information about credentials.

Credential Engine currently works with a growing number of states, institutions, federal agencies, data partners, and international partners to support their efforts to make essential data about credentials and competencies open, transparent, and linked in order to better serve students, workers, employers, and others. Credential Engine partners with national and state organizations with expertise in workforce, education and data advocacy, technical assistance organizations, employer and labor associations, and others to support policies that will make credential transparency an enduring value in the marketplace.

Why We Do It

Through an increasing array of credentials – such as degrees, licenses, badges and apprenticeships – job seekers, students, and workers have more options than ever to help them get ahead. Yet, there has never been an efficient way to collect, search, and compare credentials in a way that can be both universally understood and maintained in a manner that keeps up with the speed of change in the 21st century. With more than 1,000,000 unique credentials in the U.S. alone, and millions worldwide, this lack of information in the marketplace contributes to confusion and uninformed decision making.

Application Process

When hiring at Credential Engine, we are most interested in finding the best candidate for the job and that candidate may come from a less traditional background. We understand that no candidate will be an expert with every tool or technology listed, but if you have a strong foundation in software engineering and are excited about learning and growing, we encourage you to apply!

To be considered for this position, please submit a resume and cover letter to resumes@credentialengine.org with “Software Solutions Engineer” in the subject line. Priority will be given to applications submitted by **July 15, 2025**. The position will remain open until filled.

Primary Responsibilities for Software Solutions Engineer

Software Development:

- Design, develop, test, deploy and maintain software, including user interfaces, APIs and distributed systems.
- Take end-to-end ownership of features assigned for development.
- Ensure users can easily navigate and interact with user interfaces such as by clicking buttons and filling out forms.
- Improve speed, efficiency, and usability of the user interfaces utilizing front-end technologies.
- Engage in web application and services design reviews with a test-driven development mindset.
- Utilize Authentication/Authorization technologies for setting up Single-Sign On and Role-Based Access Control.
- Participate in Credential Transparency Description Language (CTDL) schema design process and its translation into implementation.
- Utilize Database Management concepts to design, migrate and maintain database schemas with evolving service requirements.

- Utilize standard Object Oriented design patterns for engineering reusable and testable components.
- Utilize Web API design patterns such as REST and publish OpenAPI specifications.

DevOps and Deployment:

- Utilize cloud service providers such as Azure or AWS to design distributed systems.
- Maintain a reliable, performant and scalable service by ensuring services are resilient to failures.
- Create and utilize Continuous Integration/Deployment pipelines to ensure a working-to-working state of our code base.
- Deploy code in a secured environment that meets security standards.

Integration Work:

- Integrate technologies provided by our team and other external providers.
- Provide feedback and requirements for API integrations.

Customer Interaction and Engagement:

- Work directly with customers who are engineers or other data specialists to publish and consume data.
- Actively participate in stakeholder meetings to gather requirements and provide updates.
- Provide written and verbal guidance to customers.

Technical Solutions:

- Identify technical solutions for various challenges.
- Collaborate with internal and external teams on long-term scaling solutions.

Documentation and Compliance:

- Write technical documentation, conduct reviews, and maintain the documentation, including:
 - Software Requirements Specifications
 - Interface Design Descriptions
 - System Design Descriptions
 - Test Plans
 - Integration Requirements

Additional Responsibilities:

- Perform other duties as assigned to support the organization's goals and objectives.

Qualifications for Software Solutions Engineer

Basic Requirements

- Must be a U.S. citizen or a naturalized citizen of the United States.
- Willing to submit to and must pass a background check for a security clearance.
- Minimum of seven years of combined technical education credentials, at a Bachelor's Degree level or higher, and software development experience.
- End-to-end software engineering including design, construction, updates, and maintenance in a secured environment.
- Automated software building and testing pipelines.
- Microsoft .NET programming expertise.

Technical Skills and Experience

- **Programming Languages and Frameworks:**
 - Microsoft .NET MVC, Web API, React and Angular
 - C#, HTML, CSS, JavaScript
- **Development Tools and Environments:**
 - Visual Studio 2022+, Visual Studio Code
 - Git tools (e.g., GitLab, GitHub)
 - SQL Server and/or PostgreSQL
 - Container-based solutions (e.g., Docker)
 - KeyCloak, Microsoft Entra ID
 - Linux, Windows
- **Testing and Documentation:**
 - Experience with accessibility testing.
 - Experience with automated testing frameworks and tools.
 - Testing methodologies and tools such as: Static Application Security Testing (SAST tools such as SonarCube or GitHub Advanced Security), Dynamic Application Security Testing (DAST).
 - UI Testing tools such as Selenium WebDriver, or Cypress
- **Software Engineering Documentation:**
 - Software Requirements Specifications
 - Interface Design Descriptions
 - System Design Descriptions
 - Test Plans
 - Integration Requirements
 - Software Bill of Materials

Desirable Qualifications

- Familiarity with creating standard technical documents and cyber-security requirements.
- Familiarity with the authorization to operate (ATO) process.

Workplace Skills

- Highly organized with attention to detail.
- Ability to prioritize and manage multiple projects.
- Ability to manage complex situations and relationships with confidence, confidentiality, and tact.
- Flexibility and the ability to work both independently and collaboratively.
- Excellent organizational, communication (written and verbal), and interpersonal skills.
- Proficient in critical thinking and problem-solving skills.

Work Environment and Physical Demands

- Work is performed remotely, generally from home locations, with the same demands as a traditional office environment.
- Visual and auditory acuity for extensive use of various forms of technology.

Compensation

A competitive package including salary and benefits (holidays, PTO, insurance coverage for health, dental, vision, life and disability, and a retirement plan) is available and is commensurate with experience and qualifications. The expected salary range is \$100,000 - \$125,000 annually.

Credential Engine is based in Washington, DC with most team members located around the country. All staff work remotely, with an option to utilize co-working space.

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Equal Employment Opportunity (EEO) Statement

Credential Engine is committed to providing equal employment opportunities to all employees and applicants. In accordance with federal law, Credential Engine

prohibits discrimination based on race, color, national origin, sex, gender identity, sexual orientation, age, disability, genetic information, religion, and any other characteristic protected by applicable law. We also ensure equal opportunities regardless of pregnancy or marital status.

Credential Engine provides reasonable accommodations to qualified individuals with disabilities to enable them to perform the essential functions of the job.