

Software engineer

Skills Framework track	Software and applications
Job function	Engineering and tech.
Job family	Software engineer
Sub-sectors	Retail banking, corporate banking, investment banking, private banking and wealth management, asset management, insurance
Expected augmentation by Gen AI	<p>Do more: Gen AI could automate the creation of software requirement specifications and technical documentation, generate test cases and scenarios, and perform static code analysis to identify design flaws and security vulnerabilities. Gen AI tools can also streamline threat modeling, code refactoring, and code reviews, while also assisting in the generation of detailed audit reports, thereby improving efficiency, accuracy, and overall software quality</p>

Key tasks that can benefit from Gen AI

Critical work functions	Key tasks
Analyse user and business requirements	<ul style="list-style-type: none"> Formulate software requirement specifications Translate user requirements into technical specifications
Oversee software testing	<ul style="list-style-type: none"> Specify test cases for the selected testing technique Design the test environment and test case scenarios Analyze defect arrival rate and failure intensity data Design software test plan and criteria for regression testing
Manage the design of software	<ul style="list-style-type: none"> Lead static analysis tasks to evaluate design quality Determine design alternatives and perform trade-off analysis Develop and use simulation and prototypes to evaluate software design quality
Oversee security provisions in software	<ul style="list-style-type: none"> Establish project coding standards to avoid security vulnerabilities Identify security risks and create requirements to capture security issues Model threats and associated risks of new and modified systems Perform initial threat modeling
Manage software construction processes	<ul style="list-style-type: none"> Perform code re-factoring Lead code reviews and inspections Review detailed designs and code to ensure quality requirements are met Assist in the selection of processes, models, languages, and tools for software construction
Manage software management configuration (SCM)	<ul style="list-style-type: none"> Develop and tailor tools for generating SCM audit reports Develop and maintain the SCM plan

1. Transferrable skills with an increase in one level of proficiency is considered easier to acquire than transferable skills with multiple levels of increase in proficiency, followed by net new additional skills. Depending on job redesign for the financial institution, the financial institution will have to pick select skills to reskill employees on, via a combination of on-the-job training and existing courses.

Source: SkillsFuture Skills Framework



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