

University of Virginia Job Summary

Job Code:	Job Title:	Software Engineer V
UVA Survey Code:	UVA Survey Code Title:	
Pay Band:	Career Path:	Software Engineering & Development
FLSA Status:	Management or Individual Contributor:	Individual Contributor

Position Summary: Describe below the primary purpose and function of this job.

Produce and maintain department applications to accomplish business needs. Perform engineering and development work on large-scale or highly complex projects. Serve as technical expert in software analysis, design, and implementation.

Key Roles & Responsibilities: List up to 6 key roles and responsibilities of this job.

1. Serve as the technical expert on highly complex and innovative programming assignments requiring a broad knowledge of programming procedures and data processing requirements.
2. Maintain and modify programs. Make changes by amending flow charts, developing processing logic, and coding changes. Test and document modifications and write operational instructions.
3. Determine the overall technical approach to assigned projects and design algorithms and interfaces.
4. Devise or modify procedures to solve highly complex problems considering computer equipment capacity and limitations, operating time, and form of desired results.
5. Conduct and oversee program design, coding, testing, debugging, and documentation. Conduct quality assurance reviews.
6. Analyze performance of programs and take action to correct deficiencies based on consultation with users.

Expertise: Describe the requirement for knowledge and expertise about the subject area as well as how various parts of the University work together to achieve objectives. Explain the degree of understanding required of the industry and university environment.

As the technical expert, incumbent is required to have an expert understanding of his/her discipline including all required certifications as well as an expert understanding of the business environment of a large university system. Incumbent must demonstrate an exceptional understanding of the University system, its policies, and its operating procedures. Incumbent must have excellent project management skills and the ability to work within a matrixed environment if necessary. Incumbent is expected to maintain currency of knowledge with respect to relevant state-of-the-art technology, equipment, and/or systems.

As the subject matter expert, incumbent should have expert knowledge about the requirements and best practices for developing large or complex software systems. Incumbent should have expert knowledge of established programming procedures and programming language; computer flow-charts and of programming logic and codes; current technological developments/trends in area of expertise; and customer service standards and procedures. Must be able to create specifications, generate acceptance test requirements, and partition large projects into individual components. Incumbent must have ability to identify computer problems and coordinate hardware and/or software solutions; implement and troubleshoot programming changes and modifications; write complex technical instructions in the use of programs and/or program modifications; communicate with and interpret the operational requirements of end-users; investigate and analyze information and draw conclusions; and process computer data and format and generate reports; and analyze complex business requirements and technical requests.

Problem Solving: Describe the nature and complexity of the problems this position encounters on a recurring basis. Include information regarding the level of innovation required, if any, and include mention of environmental factors that may add to the complexity of resolving issues.

Incumbent will address highly complex or unprecedented problems and will use experience, judgment, and innovation in creating solutions. Incumbent seeks assistance for problems that are business-critical. Incumbent develops innovative approaches to problem-solving and anticipates/mitigates potential issues. Incumbent must be able to quickly modify behavior to align with change; work effectively in ambiguous situations; collaborate internally and externally to create solutions to long-standing problems; consider a variety of quantitative and qualitative factors in decision-making; question current state and make suggestions for improvements; design processes and procedures to ensure quality; and analyze and determine relationships among complex problems and issues.

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Nature & Area of Impact: To what degree does this job affect the University (i.e., through interactions with faculty or students, making decisions, defining or setting strategy, etc.)? What is the breadth of the impact that this job has, either positive or negative (i.e., affects own team, department, function, business unit, entire university, etc.)?

Impact is felt within the team/department for which the incumbent works and within multiple, coordinating departments. Work quality, decision-making and long-term project management can affect the productivity of students, faculty and/or staff. Impact of errors is substantial, usually university-wide, and can have a lasting effect.

Interactions / Interpersonal Skills: Describe the nature and level of interactions this job has with others, both internally and externally. Explain any specific interpersonal skills necessary to successfully perform this role (i.e., negotiation skills, represents business at external events or to governmental bodies, etc.).

Interactions are with fellow team members and coordinating team members, but the incumbent will also have interactions with assigned student, faculty, or staff clients – typically at a management level. Incumbent works with and may manage external vendors and service providers. Incumbent should possess excellent verbal and written communication skills to convey technical guidance and information to users and to provide excellent customer service. Incumbent will train and provide guidance to more junior staff members and provide management with input into performance evaluations. Incumbent regularly provides guidance to management on critical technology issues. Incumbent guides technical direction and influences department/University strategies. Incumbent is recognized as an expert within and external to the University. Incumbent must be able to take actions that respect diversity; follow decisions through to implementation; and act in alignment with University's values.

Distinguishing Characteristics

This is the expert level for the discipline. Few incumbents will reach this level as it is reserved for those who are both internally and externally recognized as an expert in their discipline. Incumbent possesses all requirements and skills for Level 4 and has achieved proficiency in the typical tasks assigned to Level 4.

- **Skills:** Distinguished from Level 4 skills in that the Level 5 incumbent has fully developed his/her advanced technical skills, applies them regularly, and uses them to provide innovation to work processes and outcomes.
- **Level of Work:** Distinguished from Level 4 work by highly complex, strategically significant, and technically innovative activities. Assignments at Level 5 are always long-term and the incumbent has complete latitude to devise the approach and method to performing the assignment.
- **Supervision:** Distinguished from Level 4 by the complexity and uniqueness of the assignment. Level 5 assignments are typically multi-faceted, may be cross-discipline and require significant coordination and planning by the incumbent. Level 5 incumbents typically tackle unprecedented assignments and are often self-directed. Also distinguished from Level 4 in that the incumbent serves as a technical resource to all levels on the most complex and/or unprecedented problems. Level 5 incumbents will often train Level 1, 2, 3 and 4 incumbents on work processes and policies and assist management with developing their technical skills. Level 5 has input into hiring decisions and staff performance assessments, but does not directly supervise.
- **Interactions:** Distinguished from Level 4 in that the Level 5 incumbent regularly works beyond his/her own team and externally and interactions include influencing others. The Level 5 incumbent regularly works with related teams, client groups, management, vendors, and external thought leaders in related disciplines.
- **Focus:** Distinguished from Level 4 in that the Level 5 incumbent regularly works toward specific department goals and client goals, as well as establishing the technical direction of the department.

Job Requirements And Qualifications: Indicate the minimum and preferred education and experience for this job and any licenses and certifications required.

Minimum Education:	Bachelor's degree or equivalent experience in Computer Science, MIS, Computer Engineering or related disciplines.	Preferred Education:	Master's degree in Computer Science, MIS, Computer Engineering or related discipline.
Minimum Experience:	7+ years	Preferred Experience:	10+ years

Required Licenses/Certifications: