

## Job Description

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<b>Job Title:</b>	Senior Enterprise Application Integration (EAI) Developer
<b>Department:</b>	Federation of Students, University of Waterloo
<b>Reports To:</b>	IT Manager
<b>Jobs Reporting:</b>	Enterprise Application Integration (EAI) Developer
<b>Salary Grade:</b>	USG 9
<b>Effective Date:</b>	August 2019

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### Primary Purpose

The Senior Enterprise Application Integration Developer (Senior EAI), is responsible for the design, development & integrations of new and continued efforts around the Federation of Student's purchased/built information systems. The complexity of these efforts encompasses all aspects of the technical infrastructure supporting these applications, including; network and operating systems layer, database layer, programming languages, and delivery methods (e.g. client/server, web), as well as the implementation and support methodologies. The Senior EAI Developer provides project leadership throughout the life cycle of these applications. The Senior EAI Developer will collaborate with cross-campus University of Waterloo IST personnel to ensure compliance within campus wide systems and policies.

### Key Accountabilities

#### **Design, Develop & Support Applications**

- Responsible for the architecture of business applications and enhancements in accordance to the needs of the organization & the department's strategic plan
- Translate user requirements into solution design for development and implementation of enterprise integration technology solutions
- Design system logic through data flow and system architecture diagrams
- Participate in the evaluation and selection of programming languages, tools, methodologies, etc...
- Responsible for the programming of applications with thorough testing of development efforts
- Provide clear and thorough documentation and support as required
- Accountable for the management of Systems Development Life Cycle for applications

#### **Provide robust integration efforts to solve business problems and enhance process for the Federation of Students.**

- Provide expert knowledge of an Enterprise integration architecture and discuss how specific features, characteristics, functionality and design of solution will meet business requirements
- Contribute to innovation, solution architecture and application design activities to ensure that solutions adhere to standard, leverage robust technical infrastructure, and are cognizant of evolving industry trends.
- Participate in evolving guidelines, standards and consistent processes specific to Application Integration (Senior EAI), Data Integration, API/Services Integration (ESB & API Services Mgmt), B2B/EDI processes, Digital/Mobile Integration, and, Hybrid Cloud integration technologies (iPaaS)

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- Contribute to the administration and on-going maintenance of Enterprise Integration infrastructure

### **Responsible for the creation & administration of database schemas and business reporting for Feds Information Systems.**

- Lead the design, development, testing & maintenance aspects of databases across the organization
- Provide insight & recommendations in the evaluation and selection of database systems, tools and methodologies for business application development to the IT Manager
- Develop stored procedures that conform to specific outputs and performance requirements to support the real time delivery of data for reporting, analytical and operational needs
- Design, develop & maintain business intelligence solutions to help strengthen business decisions in areas such as resource utilization, member engagement and service delivery
- Build & execute queries upon request for data
- Provide information through reports and visualizations utilizing modern business intelligence tools

### **Provide strong project leadership and team participation to meet business goals.**

- Work closely with IT management to understand priorities consistent with Feds IT Business Strategy
- Provide accurate estimates for all aspects of work and work to deadline from requirements analysis and design specifications
- Provide Enterprise Application Developer support and guidance in development efforts
- Provide ongoing collaboration with Feds System Administrators to ensure computing infrastructure can meet the applications processor and database requirements
- Work within small teams or individually to provide integration solutions to meet requirements
- Actively engage with UW cross-departmental IT personnel and campus wide initiatives to ensure compliance with campus system, policies and procedures

*\* All employees of the University are expected to follow University and departmental health and safety policy, procedures and work practices at all times. Employees are also responsible for the completion of all health and safety training, as assigned. Employees with staff supervision and/or management responsibilities will ensure that assigned staff abide by the above, and actively identify, assess and correct health and safety hazards, as required.*

## **Required Qualifications**

### **Education**

- Completion of post-secondary education in field of computer science or equivalent experience.

### **Experience**

- 5-7 years in software development of business/campus applications
- Experience in the project management of development efforts

### **Knowledge/Skills/Abilities**

- Expert level understanding of software engineering and solution delivery methodologies
- Proficient in using source control tools for shared code development such as GitHub
- DevOps or similar experience in application monitoring, performance tuning & deployment with the ability to perform basic Windows/Linux server management tools.
- Expert level knowledge with one or more common MVC frameworks such as CakePHP, Ruby on Rails or Django
- Expert level knowledge of web technologies such as HTML, CSS, JavaScript etc...

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- Expert level knowledge of relational databases such as PostGres, Mssql & Mysql
- Expert level knowledge of modern Identity Access Management protocols
- Experience with Microsoft Dynamics NAV/ .NET Framework an asset
- Ability to work independently, as well as collaboratively, plan, coordinate, and implement effective information technology projects, including managing multiple and simultaneous projects
- Expert level communication and interpersonal skills, both oral and written assets
- Expert level knowledge of problem-solving application bugs and user issues
- Proficient level knowledge of project management skills

### Nature and Scope

- **Contacts:** Internally, communicate with employees in all groups and departments throughout the Feds and at all levels to gather ideas, envision, articulate, update and inform on projects for which the incumbent is the lead or is otherwise accountable. The role also communicates with other campus departments to collaborate on shared, or similar, development efforts.
- **Level of Responsibility:** This role assumes responsibility for all major development project, multiple application support areas, database administration function and application administration functions. The position will also help the IT Manager assign efforts to the Enterprise Applications Integration Developer and provide them with guidance to help meet the departments goals.
- **Decision-Making Authority:** The incumbent is responsible for advancing, building, maintaining and providing development solutions in collaboration with the IT Manager. The individual is also expected to be able to resolve complex issues independently and provide support to the Enterprise Application Integration Developer as needed.
- **Physical and Sensory Demands:** Minimal exposure to disagreeable conditions typical of an office position. Occasional heavy lifting of hardware for moves/maintenance may be required (up to 20lbs).
- **Working Environment:** Minimal exposure to disagreeable conditions typical of an office position exposed to stress and pressure associated with those responsibilities. The role may be required to work outside normal business hours during certain times of the year to support the organization's needs to accommodate for system failures, upgrades and maintenance