Job Description
Software Engineer

Grade: TBD
Reporting To: Head of ICTSS
Salary and Benefits: As per contract

Description:

The Software Engineer will create, build, implement, secure and support enterprise applications and digital services that support the academic and administrative operations of the College. The role includes full-stack application development, database management, API integration, software testing, deployment, and technical documentation. The post holder will also review suitable AI-driven automation and document processing solutions and ensure that information security, reliability, and ICTSS priorities are met.

Duties and Responsibilities:

The holder of this position will be responsible for software engineering, systems integration and application support in coordination with ICTSS as follows:

1. Create, Build, Test, Deploy and maintain secure Web based enterprise applications in C#, ASP NET.NET Core/.NET and appropriate front end technologies.
2. Collect and analyse requirements from academic and administrative departments, develop technical specifications and convert requirements into maintainable software solutions.
3. Create, keep up and improve college applications, such as SIS, HRMS, ERP and other academic and administrative systems as needed.
4. Create and maintain APIs, application integrations, and trusted internal platforms and approved external data exchanges.
5. Optimize application databases (Microsoft SQL Server and/or Oracle) designed and administered using data integrity and access controls.
6. Ensure proper use of secure development practices such as authentication, authorisation, role-based access control, API protection, handling sensitive data.
7. Troubleshoot application faults, application performance bottlenecks, database problems, and integration problems, and coordinate solution with infrastructure teams and vendors.
8. Perform unit, integration, regression and user acceptance testing, and keep source code, technical documentation and change records.
9. Facilitate version control, CI/CD pipelines, release management, application monitoring, and application deployment on-premises and to the cloud.
10. Evaluate and develop, if approved, AI-driven applications, workflow automation, and intelligent document-processing.
11. Coordinate with software vendors, offer technical input and end-user training, and facilitate the transfer of the knowledge into ICTSS staff.

12. Participate in the development of operational plans for ICTSS, information-security needs, project reports, quality assurance and other tasks as allocated.

Required Skills:

1. Good hands-on experience with C#, ASP.NET Core/. Knowledge of Object-oriented Programming, NET and web application development is required; modern front-end frameworks are a plus.
2. Have hands on experience in designing APIs, integrating enterprise systems and implementing good software architecture and coding principles.
3. Knowledge of SQL and relational databases with a preference for Microsoft SQL Server and/or Oracle, including database design and performance tuning.
4. Experience with Git, debugging, automated testing, CI/CD and application deployment, some familiarity with Docker or cloud platforms is a plus.
5. Knowledge of application and API security, such as OAuth 2.0, JWT, role-based access control, secure coding and data protection.
6. Knowledge of how to analyse complex technical problems, enhance the performance of applications, and provide reliable solutions.
7. Knowledge of AI/LLM integration, retrieval-augmented generation, OCR or document automation is preferred, pending college governance and security considerations.
8. Good written and verbal communication skills, requirements analysis and clear technical documentation.
9. Proficiency in functioning independently and collaboratively with College personnel, infrastructure groups and external software vendors.
10. Strong organizational abilities, software project coordination, and ability to stay abreast of new technologies.

Qualifications and Experience:

1. Bachelor's Degree from a recognized institution in Software Engineering, Computer Science, Information Technology or related field. Master's is preferred.
2. Minimum of 8 years' relevant professional experience in enterprise software development, preferably using. Experience in higher education systems is a plus and knowledge of NET technologies is desired.
3. Experience building enterprise applications, database-backed systems, leveraging APIs, and securely shipping software is a plus, and AI-powered solutions and DevOps experience are extra bonuses.

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