Nipissing University
Job Description

JOB TITLE: Application Developer/Analyst

DEPARTMENT: University Technology Services

CLASSIFICATION: Technologist F

WAGE GRADE: 110

EMPLOYMENT DEFINITION (STATUS): Full-time Support

SUPERVISER (POSITION TITLE):   Manager, Applications & Infrastructure

SUMMARY OF FUNCTIONS:

Reporting to the Manager, Applications & Infrastructure, one primary role of the Application Developer/Analyst will be to research, implement, and support vendor-delivered or custom applications and processes for the University community. This role requires solid experience working with modern programming and scripting languages such as C# and PowerShell, as well as working with REST APIs, version control systems, and Azure deployment tools. The Application Developer/Analyst will also be responsible for database administration, systems administration, systems integrations, process/system security, applications testing, systems documentation, creation of reports, as well as being an integral part of systems planning and implementations. Additionally, troubleshooting, resolving and documenting system, programmatic issues, and some networking issues are all major components of the Application Developer/Analyst's role. The Application Developer/Analyst will also participate in the procurement of new systems and IT services, with an emphasis on SaaS-based solutions to help meet the operational needs of the University.

The hours of work may rotate and be flexible depending on the needs of the department to troubleshoot or complete tasks/projects. The Application Developer/Analyst will be notified in advance of any changes to the regularly scheduled shifts as outlined in Article 22.02 of the collective agreement.

DUTIES & RESPONSIBILITIES:

Application Development, Database Administration, and Report Creation   (45%)

- Design, develop, implement, test, promote and maintain new custom applications and modifications using modern programming languages, frameworks, and University-approved practices after it has been determined that off-the-shelf applications are not feasible
- Design and create user interfaces ensuring interface consistency, branding standards, and accessibility
- Create and maintain inline and knowledge bases to guide other developers through the details of all custom code
- Create and maintain web pages, web applications, web services, scripts, console and UI-based applications
- Conduct needs analyses, advising clients of recommended custom and vendor delivered solutions and updates
- Design, recommend and implement job automation processes where applicable
- Actively participate in peer code review and change management processes
- Create tables, indices, database diagrams, views, triggers, stored procedures, functions and constraints to create databases with client needs and scalability in mind while adhering to data governance standards
- Creation of users, logins, operators, roles, backup and maintenance plans to ensure database security and operationality
- Develop, implement and maintain change control and testing processes for modifications to databases
- Create, maintain and monitor processes for exporting data, including custom data transformations

- Monitor the health and security of databases and take steps to correct issues to ensure data integrity, database performance, scheduled backups, and availability using event logs and automated notifications
- Create and maintain database documentation including table definitions and data relationship diagrams
- Recommend and implement report writing and Business Intelligence (BI) tools based on client needs
- Create, review and maintain reports for clients when required

Enterprise Architecture, Analysis, Automations and Systems Integrations **(25%)**

- Evaluate, implement, and document the integration of third party services, applications and tools with the existing infrastructure including the analysis of user requirements, system usability, performance, security, cost and implementation time
- Create and administer middleware to facilitate integrations using an extensive knowledge of modern programming languages and scripting languages such as C# and PowerShell
- Responsible for architecting and documenting the creation and automation of secure, cost effective custom solutions that integrate into existing enterprise systems as well maintaining existing solutions
- Analyze, consolidate, streamline, and simplify existing application infrastructure and processes

System Administration, Installations, Security, Maintenance and Troubleshooting **(25%)**

- Research, schedule, organize, communicate, perform and test both server and application software upgrades
- Install, configure, test and troubleshoot applications, patches, and upgrades on all platforms and environments
- Work with the Infrastructure team to create and maintain core enterprise services including web services, database services, and identity services
- Responsible for ensuring availability of critical enterprise services including middleware, web services, staff and student email services, printing services, reporting services, and e-commerce solutions
- Act as higher tiered support for the installation and maintenance of client applications such as enterprise client software, custom applications, and task specific software
- Manage the application of licensing for multiple enterprise systems and services
- Monitor and optimize available resources on application servers
- Liaise with the Infrastructure team to plan, implement and test backup and recovery solutions for databases, servers and any other critical resources
- Responsible for adding, revoking, and tracking access to administrative systems
- Responsible for gathering data for internal and external forensic audits and assisting with interpretation
- Ensure the confidentiality of data across enterprise systems in accordance with data governance policies
- Liaise with vendors, consultants, front line support, and clients to resolve software and server issues
- Liaise with infrastructure group to resolve software, server, security or network issues

Training, Learning, and Collaboration **(5%)**

- Provide client training for custom and third party applications
- Create and develop training materials for clients including documents, videos and knowledge base articles
- Research, learn and adapt to evolving technologies by attending conferences, performing research online, participating in user groups, as well as reading blogs, mailing lists, manuals, and books
- Learn through collaboration with your peers, supervisors, and other University community members
- Actively participate in UTS projects, contributing any pertinent skills and information
- Work collaboratively in cross-training exercises with peers, sharing and acquiring knowledge and skills

Any other duties as assigned.

QUALIFICATIONS:

Education: Bachelor degree in Computer Science or equivalent

Training and/or experience may be substituted for formal academic training at the discretion of Nipissing University

Training, Experience, Knowledge & Skills Required:
- Minimum of 2+ years of IT experience in a mid to large-scale environment
- Minimum of 2+ years of experience in advanced application development using C# and MVC
- Advanced working knowledge of PowerShell scripting
- Advanced working knowledge of JavaScript, jQuery, Knockout, and Bootstrap
- Strong working knowledge of CSS, XHTML, XML, XSLT
- Experience developing REST APIs, as well as leveraging third party REST APIs
- High degree of proficiency in designing and writing SQL queries
- Advanced version control systems skillset (e.g.: Git, SVN, TFS)
- In-depth experience using Microsoft DevOps for application development and deployment
- Advanced background in Microsoft Windows Server administration, including IIS
- Advanced troubleshooting skills including debugging network, security, SSL, AD, AD FS, Azure AD, and database/application errors
- ITIL Knowledge (Incident, Change and Problem Management) and related tools
- Experience with the Microsoft 365 suite of products
- Ability to work with minimum supervision
- Organize and work on multiple projects simultaneously while adapting to changing business goals
- Strong presentation, verbal and written skills, excellent customer service
- Microsoft 365 administration and Microsoft SQL Server administration is considered an asset
- Power BI experience is considered an asset
- SMTP administration experience is considered an asset
- Hands-on operational experience with Microsoft Azure Services is considered an asset
- Experience working with and administering virtualized environments (e.g.: VMWare, Azure) is considered an asset
- Experience with certificate management for applications and devices is considered an asset
- Experience with implementing Single Sign-on (SSO) configuration/support including SAML integrations is considered an asset
- Working knowledge of Multi-Factor Authentication (MFA) administration is considered an asset

RELATIONSHIPS/CONTACTS:

Supervised by: Manager, Applications & Infrastructure

Internal: Staff, faculty, students

External:
- Vendors
- Contacts at other colleges and universities
- Ministry analysts
- User groups
- External auditors

MATERIALS UTILIZED:

- Servers, workstations, mobile devices
- Operating systems

- Cloud and other service management tools
- Local Area Networks, Wi-Fi and the Internet
- Interactive Development Environments (IDEs), compilers
- System level utilities and scripts
- Commercial and custom applications
- Microsoft 365
- General Office Equipment
- Reference manuals
- Online sources of information such as search engines, blogs, forums, web pages and technical documentation

PHYSICAL / MENTAL DEMANDS & WORKING CONDITIONS:

- High degree of concentration and ability to work under pressure
- Extended periods working at the computer
- Occasional overnight travel for training (once or twice a year)
- Occasional overtime hours for maintenance or a flexible work schedule to troubleshoot or complete tasks/projects to accommodate the needs of the department
- Required to provide a Criminal Record Check as a condition of employment (i.e., not have been convicted of a criminal offence for which a pardon has not been granted)

I have read my position description and it has been reviewed with my supervisor.   I understand what my duties and functions are, and I will carry out all of my responsibilities as herein described.

_____

Employee Name (please print)

_____   _____

Employee   Date

Approvals

_____   _____

Supervisor   Date

_____   _____

Human Resources   Date