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

SUPERVISOR (POSITION TITLE): Manager, Applications & Infrastructure

DATE LAST REVISED: May 2026

SUMMARY OF FUNCTIONS:

Reporting to the Manager, Applications & Infrastructure, the Application Developer/Analyst plays a key role in delivering and supporting both vendor provided and custom applications that serve the University community. The role focuses on translating business and operational needs into secure, reliable, and sustainable technical solutions across a diverse and evolving application environment.

The Application Developer/Analyst brings strong hands-on experience with modern development and automation technologies, including C#, PowerShell, RESTful APIs, version control systems, Azure based deployment tools, and containerized application platforms such as Docker and Kubernetes. The role embraces contemporary development practices, including the responsible use of AI assisted and emerging agent-based tooling, such as GitHub Copilot and workflow-oriented automation, to improve code quality, developer productivity, solution consistency, and long-term maintainability.

Responsibilities span the full application lifecycle and include application and database administration, systems integration, security, testing, documentation, reporting, and ongoing operational support. The Application Developer/Analyst contributes to system planning, modernization initiatives, and new implementations, leveraging automation and AI assisted insights where appropriate to support troubleshooting, operational optimization, and continuous improvement. Troubleshooting responsibilities may extend across application, infrastructure, identity, and selected networking components.

DUTIES & RESPONSIBILITIES:

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

- Design, develop, implement, test, deploy, and maintain custom applications and enhancements using modern programming languages, frameworks, and University-approved development practices when off-the-shelf solutions are not appropriate
- Design and build user interfaces that are consistent, accessible, and aligned with University branding and usability standards
- Develop, maintain, and support web applications, APIs, services, automation scripts, and both console-based and user-facing applications
- Leverage modern development practices, including containerized application architectures (e.g. Docker-based solutions) and supporting deployment platforms where appropriate

- Apply AI-assisted development tools, such as GitHub Copilot, to improve code quality, efficiency, and maintainability while adhering to secure and responsible development standards
- Create and maintain clear inline documentation and shared knowledge bases to support code reuse, maintainability, and collaboration across development teams
- Conduct requirements analysis and consult with clients to recommend appropriate custom or vendor-delivered solutions, enhancements, and updates
- Design, recommend, and implement automated jobs and processes to improve reliability, efficiency, and operational consistency
- Actively participate in peer code reviews, testing activities, and formal change management processes to ensure solution quality and stability
- Design and implement database structures, including tables, indexes, views, constraints, triggers, stored procedures, and functions, with scalability, performance, and data governance standards in mind
- Administer database security and operations, including users, roles, permissions, backups, and maintenance plans to ensure availability and integrity
- Develop, implement, and maintain database testing and change control processes to support safe deployment of schema and data changes
- Create, maintain, and monitor data export and integration processes, including custom data transformations where required
- Monitor database performance, health, and security, proactively identifying and resolving issues using event logs, alerts, and automated notifications
- Create and maintain database documentation, including schema definitions and data relationship diagrams
- Recommend and support reporting and Business Intelligence (BI) tools based on client needs
- Design, develop, review, and maintain reports and dashboards to support operational, analytical, and decision-making needs

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

- Evaluate, design, implement, and document integrations between third-party services, SaaS platforms, and internally developed applications, considering business requirements, usability, performance, security, cost, and implementation effort
- Analyze integration requirements and recommend appropriate architectural approaches, including API-based, event-driven, and middleware-supported integration patterns
- Design, build, and administer middleware and integration components using modern programming and scripting languages such as C# and PowerShell
- Architect, implement, and maintain secure, scalable, and cost-effective custom solutions that integrate seamlessly with existing enterprise systems and platforms
- Leverage automation to streamline system interactions, data flows, and operational processes, improving reliability and reducing manual effort
- Support and evolve container-based integration workloads where appropriate, using technologies such as Docker and orchestration platforms to enable portability and scalability
- Apply modern development practices, including AI-assisted tooling, to accelerate analysis, integration development, and solution maintainability while adhering to security and governance standards
- Produce clear architectural and technical documentation to support solution transparency, long-term sustainability, and operational support
- Analyze existing application architectures and integration workflows to identify opportunities to consolidate, simplify, modernize, or retire systems and processes

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

- Plan, coordinate, implement, and validate server and application upgrades, patches, and maintenance activities across development, test, and production environments, using automation and data-driven insights where appropriate

- Install, configure, test, and support applications and platform components across on-premises, virtualized, and cloud-hosted environments
- Work closely with the infrastructure team to design, implement, and support core enterprise services, including web platforms, database services, identity, and integration services
- Support the availability, reliability, and performance of critical enterprise services, including middleware, web services, enterprise email, printing, reporting, and e-commerce platforms
- Provide high-level technical support for complex application installations and ongoing maintenance, including enterprise and custom-developed solutions
- Support containerized and cloud-hosted application workloads where appropriate, including Docker-based deployments and related platform services
- Monitor, optimize, and troubleshoot application server resources, leveraging automation, telemetry, and AI-assisted diagnostics to proactively identify and resolve issues
- Collaborate with Infrastructure to plan, implement, test, and maintain backup, recovery, and business continuity solutions
- Administer and audit access to application and administrative systems, including provisioning, de-provisioning, and periodic access reviews
- Support security, compliance, and audit activities by gathering, analyzing, and validating system data in accordance with institutional policies
- Ensure the confidentiality, integrity, and availability of enterprise systems and data through adherence to security, privacy, and data governance standards
- Apply automation, scripting, and AI-assisted tooling to improve operational efficiency, consistency, and incident response
- Liaise with vendors, consultants, support teams, and stakeholders to diagnose and resolve application, server, security, or integration-related issues

Training, Learning, and Collaboration (5%)

- Provide training and knowledge transfer to clients for custom-developed and third-party applications, ensuring users can effectively and confidently adopt new solutions
- Create and maintain high-quality, accessible training resources, including documentation, videos, and knowledge base articles, leveraging modern tools and AI-assisted content creation where appropriate
- Promote the responsible and effective use of AI-assisted tools, such as GitHub Copilot and related technologies, to improve development practices, productivity, and code quality
- Evaluate and adopt emerging technologies, platforms, and AI-enabled tooling through self-directed learning, professional development opportunities, conferences, user groups, and trusted technical resources
- Grow technical expertise through active collaboration with peers, supervisors, and members of the University community, sharing best practices and lessons learned
- Actively contribute to UTS initiatives and projects, contributing technical insights, innovation, and continuous improvement ideas
- Engage in cross-training and knowledge-sharing activities to build team resilience, expand collective expertise, and support continuity of operations
- Participate in the evaluation and procurement of new systems and IT services, with a focus on SaaS-based and cloud-enabled solutions that align with the University's operational, security, governance, and strategic objectives

Any other duties as assigned.

QUALIFICATIONS:

Education: Bachelor's degree in computer science or equivalent

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

Required Experience, Knowledge & Skills:

- Minimum three years of IT experience in a mid- to large-scale enterprise environment with hands-on experience designing, developing, and maintaining production applications using C# and ASP.NET MVC
- Provide a Criminal Record Check as a condition of employment (e.g., Must not have any criminal convictions for which a pardon has not been granted)
- Advanced working knowledge of PowerShell scripting for automation, systems management, and operational support
- Extensive experience developing and maintaining both modern and legacy front-end applications using JavaScript, including TypeScript, frameworks such as React or Vue, and legacy technologies such as jQuery and Knockout; experience with Bootstrap or comparable UI frameworks
- Strong expertise in modern CSS and responsive design principles, with experience supporting standards-based and XML-driven web technologies where required
- Proven experience designing, developing, and consuming RESTful APIs, including secure integration with third-party services and platforms
- High degree of proficiency in designing, optimizing, and maintaining complex SQL queries and database interactions
- Strong practical experience with version control systems, with a primary focus on Git and familiarity with legacy systems such as SVN or TFS
- In-depth experience using Azure DevOps for source control, build and release pipelines, and application deployment
- Demonstrated experience administering and supporting Microsoft Windows Server environments, including IIS application hosting and configuration
- Strong troubleshooting and diagnostic skills across application, database, authentication, identity, and infrastructure layers, including Active Directory, AD FS, Azure AD (Entra ID), SSL/TLS, networking, and security-related issues
- Experience applying secure development and deployment practices, including authentication, authorization, and data protection considerations
- Working knowledge of ITIL practices, including Incident, Change, and Problem Management, in an enterprise service delivery environment
- Experience working with Microsoft 365 services and integrating applications within a Microsoft-centric ecosystem, Experience administering Microsoft 365 services is an asset
- Ability to work independently with minimal supervision, exercising sound judgment in technical and operational decision-making
- Demonstrated ability to manage multiple priorities and initiatives simultaneously while adapting to evolving business and institutional requirements
- Strong verbal, written, and presentation skills, with a demonstrated commitment to collaboration, professionalism, and high-quality customer service
- Experience administering and supporting Microsoft SQL Server environments
- Experience developing reports, dashboards, and data visualizations using Power BI
- Working knowledge of SMTP configuration, mail flow, and email delivery troubleshooting
- Hands-on operational experience with Microsoft Azure services, including compute, storage, and identity-related services
- Experience working with virtualized environments, including VMware and Azure-based virtualization
- Experience managing digital certificates for applications, services, and devices, including renewal and lifecycle

management
- Experience implementing and supporting Single Sign-On (SSO) solutions, including SAML-based integrations
- Working knowledge of Multi-Factor Authentication (MFA) configuration, administration, and user support
- Familiarity with application authentication and authorization models, including OAuth or token-based access where applicable
- Experience with application monitoring, logging, and diagnostics using built-in or third-party tools
- Working knowledge of backup, recovery, and business continuity concepts in application and server environments
- Experience supporting secure application deployments, including patching, configuration management, and vulnerability mitigation
- Exposure to automation or infrastructure scripting beyond core application development (e.g. PowerShell for operational tasks)

RELATIONSHIPS/CONTACTS:

Supervised by: Manager, Applications & Infrastructure

Internal: Staff, faculty, students

External:
- Vendors
- Technical vendor consultants contacts at other colleges and universities
- Ministry analysts
- User groups
- External auditors

MATERIALS UTILIZED:

- On-premises, virtualized, and cloud-based operating systems and platforms
- Enterprise servers, application platforms, workstations, and mobile devices
- Cloud, SaaS, and service management tools, including monitoring and automation platforms
- Local area networks, wireless networks, and Internet-based services
- Integrated development environments, build tools, compilers, and source control systems
- System level utilities, automation scripts, and configuration tools
- Commercial off-the-shelf, SaaS, and custom developed applications
- Microsoft 365 services and associated administrative tools
- Container and application runtime platforms supporting modern application delivery
- AI-assisted development, operational, and productivity tools used to support analysis, development, troubleshooting, and documentation
- Office and collaboration technologies supporting daily operations
- Technical reference materials, internal standards, and vendor documentation
- Online technical resources, including official documentation, knowledge bases, forums, developer communities, and trusted research sources

PHYSICAL DEMANDS & WORKING CONDITIONS:

- High degree of concentration and ability to work under pressure
- Long periods of time working at the computer
- Occasional overnight travel for training
- Occasional overtime hours for maintenance, troubleshooting or completion of tasks/projects

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