

Division: Technology Support Office
Position: Data and Apps Engineer
Reports to: Information Systems Manager
Working hours: From 08:00 AM to 5:00 PM, Monday through Friday (outside regular hours, including evenings or weekends, in the event of emergencies or maintenance)

About UNIS Hanoi:

UNIS Hanoi is an extraordinary school - It is uniquely one of only two United Nations international schools in the world. It is where the world comes together every day and our 1200 students from 65 nationalities are engaged in learning that leverages curiosity, critical thinking, independent research and rigorous expectations to nurture excellence, empathy, creativity and resilience.

Our students are attending the best universities in the world and our global community of alumni is quite literally changing the future for a better world.

Position summary:

You will be developing and maintaining a data warehouse along with its essential components such as data pipeline integration, ingestion/transport, workflow orchestration, storage, processing, encryption, monitoring, business intelligence and analytical dashboarding. You will also develop and maintain custom applications based on school needs. As a member of the Information Systems team in the technology office, you will be required to understand the school's operational and academic needs and work closely with staff and faculty to document requirements, design, implement and support appropriate data analytics and custom built applications. You will be required to contribute to the school's initiative of a data maturity framework including strategic planning, ensuring data quality, standardisation, integration and compliance with data governance, privacy and protection guidelines. You will also be required to support the school's efforts in integration of artificial intelligence in our systems and processes within the scope of your responsibilities.

Responsibilities:

The Data and Apps Engineer will be directly responsible for contact between data owners and is responsible for implementing, managing, organizing and administering the Data Warehousing (DW), Business Intelligence (BI), Data Analytics (DA), Data Dashboard (DB), Extract, Transform and Load (ETL) and Google Appsheet and App Scripts based customised application solutions. This position is also responsible for general planning, oversight and training for the data processing and storage systems as well as routine and non-routine system operations and maintenance functions of these systems. A list of non exhaustive responsibilities related to this position is as follows:

- Analysing problems and providing solutions through data automation involving writing, managing, maintaining and troubleshooting scripts and algorithms that automate data flows from one system to another

- Identifying potential and existing data issues and discussing with appropriate people/teams
- Ensure the quality and integrity of data from capturing to reporting
- Formulate techniques for quality data collection to ensure adequacy, accuracy and legitimacy of data
- Assist with reports and data extraction, analysis and interpretation when needed
- Actively engage with developers community across other schools and industry to improve applications and establish best practices
- Work with Information Systems Manager for all periodic as well as ad-hoc tasks and projects to support the needs of school systems that are linked to the School MIS
- Work with Information Systems Manager to provide solutions for data analysis, visualisation, dashboarding and custom application development
- Investigate and propose technological solutions that meet these business requirements, including data warehousing, automations, custom application development and integration of applications and systems
- Recommend new processes or improvements in existing processes and workflows related to data warehousing and automation according to industry's best practices and identified needs of UNIS Hanoi
- Work closely with senior management, school administrators, faculty and staff to identify data owners, streamline processes and build a culture of data responsibility as well as best use practices to encourage the dynamic and creative use of the academic and operational data at UNIS Hanoi
- Maintain appropriate, robust and updated documentation and auditable data management processes, procedures, configurations and change management
- Maintain an awareness of the latest technological trends and developments in Educational Software and Data systems
- Participate in evaluating new software projects to determine impacts
- Analyse, evaluate, troubleshoot and communicate with the technology team on problems related to data engineering, automation tasks and custom developed applications
- Record all incidents and requests with relevant details in the IT helpdesk system
- Working diligently to meet the SLAs (Service Level Agreements) for all reported issues and requests.
- Corresponding and collaborating closely with other school wide technology teams e.g. Technology Leadership Team, Technology & Innovation Coaches and Technology Team) regarding data engineering, automation projects, custom application development and issues
- Performing other duties as and when assigned by the supervisor

Within 1 month you'll be expected to:

- Have a clear understanding of UNIS Hanoi's Mission, Vision and Values, schoolwide and technology strategic plan and the technology team's shared values and goals
- Have established a strong, agile and collaborative thought partnership with the members of Information Systems team for effective communication based on a constructive feedback model

- Present a comprehensive 'strengths and growth' review to your supervisor along with a 3 and 6 months plan for projects and tasks under your purview that focuses on how you can utilise your experience and skills to meet the existing deadlines and provide strategic input for projects under planning
- Have an effective KPI report plan shared with your supervisor based on your goals and professional development needs
- Demonstrate and role model a deep understanding and ownership of high quality and ITSM (IT Service Management) aligned Change Management, Workflows and Documentation processes for an effective data automation, data engineering, warehousing and application development in a dynamic and demanding environment

Within 3 months you'll be expected to:

- Demonstrate effective integration in the team and school by conducting and presenting results of a comprehensive 360 feedback survey
- Demonstrate an authentic and inclusive approach in your work style by having formed strong professional relationships across the technology and other teams of UNIS Hanoi
- Present a systems thinking and growth mindset approach through a performance review based on the goals set at the beginning of your appointment
- Have reviewed and analysed evolving business requirements of data warehousing, data engineering and custom apps development. Investigated and shared solid roadmap that meet school's identified and verified requirements
- Exhibit strong project management skills by recommending new processes or improvements in existing processes related to data warehousing, data engineering and automation and custom application development, according to the education industry's best practices and identified needs of UNIS Hanoi.
- Fully understand and display ownership of the areas relevant to your responsibilities

Within 6 months you'll be expected to:

- Demonstrate effective delivery of projects and tasks assigned to you with implementation of Service Level Agreements (SLAs) on all areas of your responsibilities
- Have planned, communicated and sought agreement from your supervisor and started the implementation of an effective professional development plan for yourself
- Have gained a full understanding of UNIS Hanoi's data maturity framework, data warehousing, data engineering, automations and custom application development with an understanding of their relationship with systems, operational and educational domains along with clearly defined objectives and desired outcomes
- Have a strong collaborative partnership with team and divisions leaders across the school, to ensure an effective partnership and feedback model to help with identifying and addressing gaps as well as opportunities for improvement in areas of your responsibility
- Have engaged on at least one professional development path to obtain skills in a domain that will directly impact the quality and ownership of projects and tasks under your purview

Within 12 months and beyond you'll be expected to:

- Continue delivering impactful and well planned projects
- Align your annual performance review goals in your domain with school and team strategic plans
- Build reflection and feedback model in your work practice to inform your growth and development
- Stay up to date with current best practices and trends in data warehousing, engineering, automation, artificial intelligence integration and low-code platforms
- Continue to prove the efficacy of your skills and existence of a strong trust based relationship with your team through an annual 360 feedback survey
- Bring forth the core values of UNIS Hanoi demonstrated by your work ethics and relationships built with the school community

Key Competencies:

i. Education / qualification

- At least a Bachelor's Degree in Computer Science, Data Engineering or Business Information Technology
- Certifications in latest data engineering, data automation and app development technologies

ii. Experience

- At least two years academic projects or work experience in data automation, data engineering and application development

iii. Skills and knowledge

- Critical thinking, analytical mindset with collaborative, innovative and positive work attitude
- Excellent verbal and written communication skills in English language
- Working knowledge of data management industry standards and best practices
- Knowledge of and experience in data engineering, automation and web applications development technologies, not limited to those listed below, is required:
 - a. Relational Databases
 - b. Advanced SQL scripting
 - c. Google's BigQuery, Apps Script, AppSheet, Cloud Composer, Dataform, Vertex and other Google Cloud Platform products
 - d. Python
 - e. Web browser automation tools such as Selenium, Cypress, Puppeteer
 - f. Statistical analysis software e.g. Stata and R
 - g. Business Intelligence, data orchestration, data visualizations and dashboarding using Google Looker Studio
 - h. Javascript, CSS and HTML
 - i. Github, Apache Subversion (SVN) and/or other version control systems
 - j. Data Transformation Services (DTS)

- k. Application Programming Interfaces (APIs), JSON, XML, REST, parsing, queue management and other integration methods
 - l. Extract, Transform and Load (ETL) processes and methodologies
 - m. Online analytical processing (OLAP) and Online transaction processing (OLTP)
- Knowledge of and experience in data engineering, web and automation technologies, not limited to those below, is *highly desirable*:
 - a. NoSQL, Object Oriented, Distributed, Hierarchical and other database types
 - b. Machine learning with predictive analytics
 - c. AI agent builder tools e.g. Google Vertex
 - d. Other Data Lake and Warehousing tools such as Snowflake
 - e. Ruby, JavaScript and PHP
- Knowledge and understanding of the academic and educational uses and needs with regards to data processes is highly desirable
- Experience in project management is highly desirable
- Experience in producing knowledge base and training materials is highly desirable
- Experience in creating and maintaining documentation for systems development
- Ability to effectively analyse and resolve root causes of technical problems
- Ability to organize and analyse data and complex tasks in a systematic manner
- Able to work diligently, independently, confidentially and under time constraints
- Positive and growth mindset with excellent customer service skills
- Ability to learn and adapt to new and innovative technology developments
- Ability to be flexible, creative and problem solve novel technology issues in a fast paced and dynamic environment