

Yengin Loay

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PROFESSIONAL EXPERIENCE

Software Developer | Public Health Agency of Canada - National Microbiology Laboratory Jul 2024 - Present

Led database and data engineering efforts at NML, designing scalable pipelines and architectures that improved data reliability and supported national public health systems | Python, SQL, Fabric, Pyspark, Azure, Power BI, Oracle, GraphQL

- Contributed to application development, infrastructure and analytical projects; bridging data, software, and operations to deliver end-to-end solutions
- Led deployment of a G7 Summit application for Mobile Emergency Response Team (biosecurity unit); addressed emergent requirements, iteratively tested code and UX, and provided on-call support throughout the event
- Researched data management requirements providing strategic advice to IT and development teams on DBMS tools, resulting in the implementation of best practices and improved data handling processes
- Collaborated with internal and provincial partners to gather user requirements and define technical requirements
- Developed real-time data access to users with Azure functions to trigger database refreshes upon data ingestion
- Resolved support tickets addressing user issues with databases, ETL workflows, and application functionality
- Designed and maintained Power BI reports and dashboards, data modeling and deployment to deliver insights
- Created user guides and led training sessions on software updates reducing support calls
- Documented technical decisions, ETL workflows, data dictionaries, and system architecture changes, ensuring clarity and consistency to facilitate seamless knowledge transfer and onboarding
- Provided L1 IT support, assisting 70 users with new machine setup and password issues, maintaining department-wide workflow continuity

Data Engineer | Bass Pro Shops - Cabela's May 2023 - July 2024

Designed and optimized data integration processes | Python, SQL Server, Airflow, Docker, Visio

- Spearheaded redesign of marketing department's data pipelines, achieving a 99% success rate and reducing pipeline runtime by 50% resulting in improved data quality and infrastructure scalability
- Migrated legacy Access databases and VBA scripts to SQL Server and Python solutions, enhancing data management capabilities and ensuring scalability and maintainability for future growth
- Integrated data from multiple RESTful APIs (SAP, Google Analytics) for data analysis, and BI and reporting

HCI Research Assistant | University of Manitoba – Dept. of Computer Science May 2022 - May 2023

Studied the intersection of older adults, closer others, and technology | R, JavaScript, AWS, InDesign

- Executed an online survey for caregivers who do online banking with or on behalf of older adult clients
- Orchestrated a targeted participant recruitment campaign, including recruitment poster and social media content
- Prototyped "behavioural nudges" (interface elements) to encourage responsible behaviours in online banking apps
- Presented a research poster at the Centre on Aging's 40th Research Symposium engaging 200+ participants
- Developed an accessible interactive data dashboard exploring the General Social Survey (2018) data for users with varying levels of data and computer literacy using R (Shiny) and JavaScript, hosted with AWS EC2 instances

Data Production Officer | Statistics Canada Jun 2022 - Dec 2022

Extracted and transformed labourforce and health data sets for socio-economic reporting | SAS, Python, R, SQL

- Produced 40+ custom statistical tabulations for client requests, ensuring accuracy through rigorous QA/QC
- Conducted qualitative analysis on "Return to Office" survey of 70+ responses for a report to senior management
- Developed a script to automate data validation from pdf reports eliminating 1000+ hours of manual effort

Aquatic Biologist | Fisheries & Oceans Canada - Freshwater Institute Sep 2011 - Apr 2017

Conducted research in aquaculture science and benthic ecology | R

- Evaluated ecosystem health and sustainability of aquaculture practices by applying quantitative methods and statistical modeling for data collection, analysis; authored research papers
- Mentored 10+ students and junior staff over 2 years, in data collection and processing techniques (lab & field)

TECHNICAL SKILLS

Programming Languages: Python, SQL, Java, C#, C/C++, HTML, CSS, JavaScript, TypeScript, R, SAS

Technologies: Azure, Fabric, SQL Server, Power BI, Docker, Airflow, TensorFlow, Git, Playwright, Firebase, AWS

EDUCATION

University of Manitoba, B.Sc. Major: Computer Science | B.Sc. Major: Biological Sciences