# EUGENE JOH

**CONTACT**
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**LOCATION**: Ottawa, ON, Canada
**SECURITY CLEARANCE**: Reliability

**SUMMARY**
Eugene is an epidemiologist/data analyst with 6+ years' experience working in various multidisciplinary research and analytics settings with increasing responsibilities. Professional interests include leveraging open-source data science tools, effective data communication, and implementing reproducible workflows. Skills include:

- Expertise in infectious disease epidemiology and disease surveillance
- Extensive experience in data management and performing statistical analyses
- Advanced proficiency in **R** for programming, reproducible reporting, and data visualization
- Working knowledge of **Python** and **SAS** for data processing and analysis
- Knowledgeable with querying various RDBMS using **SQL** (PostgreSQL, SQLite, MySQL)
- Skilled in developing interactive dashboard using **R Shiny**, **Power BI**, **Tableau**
- Experience with **Git** for version control (GitHub, GitLab)
- Familiarity of cloud analytic platforms (Azure **Databricks**, GCP **BigQuery**)
- Experience using **ArcGIS**, **QGIS**, **PostGIS** for geospatial data processing and analytics

**EDUCATION**

1. **Degree**: Master of Science and Master of Public Health (MS/MPH)
   **Location**: Boston University, Boston, Massachusetts, USA
   **Specialization**: Medical Sciences (MS) and Environmental Health – Infectious Diseases (MPH)
   **Thesis**: "The molecular epidemiology of Methicillin-resistant Staphylococcus aureus (MRSA) in the major countries of East Asia"
   **Attended**: September 2015 to January 2017 (degree awarded)

2. **Degree**: Bachelor of Medical Sciences (BMSc)
   **Location**: Western University, London, Ontario, Canada
   **Specialization**: Honours Specialization in Medical Biophysics
   **Thesis**: "Gene-based contrast for MRI: influence of MagA expression on transferrin receptor and iron uptake"
   **Attended**: September 2008 to May 2013 (degree awarded)

**PUBLICATIONS & REPORTS**
**ORCID:** 0000-0001-9348-630X (https://orcid.org/0000-0001-9348-630X)

**EXPERIENCE**

1. **Title/Group**: Epidemiologist/Biostatistician
   **Date**: 2023/03 – Present (End Date: 2025/03)
   **Organization**: Vaccine Safety Division, Infectious Diseases and Vaccines Programs Branch, Public Health Agency of Canada
   **Location**: National Capital Region, Canada
   - Led the design and implementation of a new cloud-based database platform using Azure Databricks, R and SQLite for capturing vaccine lot information from market authorization holders
   - Facilitated updates for the new national adverse events following immunization (AEFI) reporting form by collaborating with key Federal, Provincial, Territorial (FPT) and internal partners
   - Performed data management and analysis tasks using SAS for the Canadian Adverse Events Following Immunization Surveillance System (CAEFISS) to improve data quality standards
   - Designed interactive dashboards using R Shiny to empower non-technical staff to gain insights from querying vaccine lot data sources and performing routine data quality assurance tasks
   - Regularly participated and acted as a division representative in various internal and external working groups (Vaccine Vigilance, Vaccine Supply, National Vaccine Catalogue)

2. **Title**: Epidemiologist Lead
   **Date**: 2023/02 – 2023/03
   **Organization**: Analytic Services, Public Health Ontario
   **Location**: Toronto, Ontario, Canada
   - Initiated the creation of a seasonal respiratory pathogen interactive tool using Power BI
   - Facilitated cross-organizational meetings with internal stakeholders to identify business and functional requirements for a successful interactive reporting tool

3. **Title**: Epidemiologist
   **Date**: 2019/10 – 2023/02
   **Organization**: Communicable Diseases and Emergency Preparedness and Response, Public Health Ontario
   **Location**: Toronto, Ontario, Canada
   - Led the development of “nowcasting” methodology using R for estimating growth rates of emerging SARS-CoV-2 lineages in collaboration with laboratory partners
   - Led and supported complex data requests and prepared timely reports to inform senior management and decision makers on current trends of COVID-19 across Ontario
   - Designed innovative and scalable reporting workflows using R Markdown that improved the efficiency of data insights being generated from surveillance information systems to end users
   - Conducted descriptive analyses that identified high-risk neighbourhood areas for COVID-19 outcomes which directed the provincial vaccine rollout strategy and resulted in an equitable vaccine distribution in Ontario
   - Drafted scientific manuscripts and public reports that examined individual and neighbourhood level factors associated with COVID-19 reporting and transmission
   - Performed text mining analyses using Python to extract relevant laboratory test information to estimate COVID-19 testing rates in the province
   - Identified and implemented best practices in data processing and data visualization to improve information communication for internal and public facing data products

4. **Title**: Research Coordinator/Data Manager
   **Date**: 2018/05 – 2019/10
   **Organization**: Centre for Global Health Research, St. Michael's Hospital
   **Location**: Toronto, Ontario, Canada
   - Managed multinational health and administrative databases from India and Sierra Leone for mortality and epidemiological research studies
   - Performed routine data cleaning and spatial data record linkage using household survey and health indicator data sources using ArcGIS, PostGIS, and R

5. **Title**: Research Assistant
   **Date**: 2017/08 – 2018/04
   **Organization**: Environmental and Occupational Health, Public Health Ontario
   **Location**: Toronto, Ontario, Canada
   - Conducted literature reviews on drinking water quality incidents and waterborne disease outbreaks in Ontario
   - Developed an internal spatial tool for assessing drinking water exposures across Ontario

6. **Title**: Data Analyst
   **Date**: 2017/04 – 2018/08
   **Organization**: Program for Monitoring Emerging Diseases (ProMED-Mail), International Society for Infectious Diseases (ISID)
   **Location**: Boston, Massachusetts, USA
   - Performed exploratory and time series analyses of recently established South Asia and Middle East/North Africa networks to identify outbreak reporting trends in each region

7. **Title**: Research Assistant
   **Date**: 2016/05 – 2016/09
   **Organization**: Department of Environmental Health, Boston University School of Public Health
   **Location**: Boston, Massachusetts, USA
   - Generated regression models for multistage-sampling survey (NHAMCS) to identify factors associated with skin and soft tissue infections among unhoused patients during hospital ER visits

**VOLUNTEEER EXPERIENCE**

1. **Title**: Data and Analytics Consultant
   **Date**: 2019/06 – 2022/05
   **Organization**: Bopoma Villages (non-profit)
   **Location**: Toronto, Canada and Zaka, Zimbabwe
   - Supported survey design and implementation for data collection for ongoing programs
   - Established data infrastructure for robust program monitoring and evaluation protocols

2. **Title**: Hackathon Organizer
   **Date**: 2017/09 – 2018/03
   **Organization**: International Society for Infectious Diseases and MIT Hacking Medicine
   **Location**: Toronto, Canada and Buenos Aires, Argentina
   - Organized a two day hackathon event involving international public health/medical professionals and researchers during the 18$^{th}$ International Congress on Infectious Diseases
   - Provided technical advice on data utilization and feedback to groups during practice pitches

**TEACHING AND KNOWLEDGE TRANSFER**

1. **Event/Course**: Public Health Ontario R Workshops (internal)
   **Location**: Public Health Ontario
   **Date**: 2022/06 – 2022/08
   - Co-led introductory workshops for practicum students and staff to perform basic data cleaning and create data visualizations using tidyverse principles

2. **Event/Course**: Toronto Data Workshop
   **Location**: University of Toronto Faculty of Information
   **Date**: 2022/02
   - Presented talk "Data Cleaning + Fuzzy Matching in R" to academic faculty and students

3. **Event/Course**: R Community of Practice
   **Location**: St. Michael's Hospital
   **Date**: 2019/06
   - Presented talk "Data Import and Cleaning in R" slides link to epidemiology post-doctoral students and public health professionals

4. **Event/Course**: Quantitative Methods for Public Health (PH717)
   **Location**: Boston University School of Public Health
   **Date**: 2016/08 – 2016/12
   - Facilitated R programming and statistics labs and graded exams as a graduate teaching assistant