

EUGENE JOH

CONTACT

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LOCATION: National Capital Region (NCR)

SECURITY CLEARANCE: Reliability

LANGUAGE: English Essential

SUMMARY

Eugene is an epidemiologist/data analyst with 6+ years' experience working in various multidisciplinary research and public sector 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** and **Power BI**
- 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, EC-05 (Term)

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 (Contract)

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 (Contract)

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 (Contract)
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 clean and spatial data record linkage using household survey and health indicator data sources using ArcGIS, PostGIS, and R
5. **Title:** Research Assistant (Contract)
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 (Unpaid)
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 (MPH Practicum)
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

VOLUNTEER 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 18th 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