

# JULIA LIOU

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## Skills

**Languages:** Python, SQL, JavaScript, HTML, CSS, NoSQL, R

**Applications:** Tableau, GitHub, MongoDB, SQLite, PostgreSQL, Flask, Command Line, Microsoft Power BI

**Tools:** Excel, Databases, Pandas, Jupyter Notebook, Pandas, Seaborn, Skit learn, TensorFlow, VBA, Matplotlib

**Soft Skills:** Communication, Collaboration, Attention-to-Detail, Problem-Solving, Time Management, Leadership

## Education

**University of Toronto**

**Toronto, ON**

- **Certificate in Data Analytics Bootcamp**

**April 2023 - Oct 2023**

**University of British Columbia**

**Vancouver, BC**

- **Bachelor of Science in Nursing**
- **Bachelor of Science in Biology & minor in Nutritional Sciences**

**2018 - 2020**

**2012 - 2016**

## Projects

**Machine Learning for Malaria Diagnosis - Python | Team Lead | GitHub:** <https://github.com/jnliou/project4>

- Collaborated to develop a few machine learning models, including a central neural network model for malaria diagnosis using cell image data.
- Utilized advanced image analysis techniques such as blob detection, edge detection, edge density analysis, and average color comparison to distinguish between unprocessed and processed as well as uninfected and infected cells. The results were integrated into a comprehensive dataframe and exported for further analysis, aiding in malaria diagnosis research.

**Citi Bike Project Dashboard - Tableau & JavaScript | Dashboard:** <https://jnliou.github.io/citibikenyc/>

- Developed a comprehensive dashboard using **Tableau** detailing the overview of the trend and patterns in Citi bike usage over a set of dynamic time periods July 2022 to July 2023.
- Created specialized visualizations such as density map plots for NYC by aggregating user travel data. This highlighted the concentration of the most frequently used stations in New York and can be used to help build new bike stations in unfocused areas.

**Crime Analysis - Python, SQL, JavaScript | Team Lead | GitHub:** <https://github.com/jnliou/crimeanalysis>

- Led a cross-functional team of five members in analyzing five years of crime data (2019-2023) for Portland, Oregon, identifying actionable insights for law enforcement and public awareness.
- Oversaw end-to-end data management, from cleaning and transformation to integration and visualization, using tools like Python, Flask, SQLite, and D3.js.

## Work Experience

**North York General Hospital**

**Toronto, ON**

Registered Nurse

**November 2022 - Present**

- Provided patient-centered care, collaborated with interdisciplinary teams.
- Conducted assessments, created care plans, utilized Cerner - CST.

**BC Women's Hospital**

**Vancouver, BC**

Registered Nurse

**September 2020 - September 2022**

- Supported new mothers and infants during the postpartum period, utilized Cerner - CST for EMR and charting.

**BC Children's Hospital Research Institute - Vaccine Evaluation Center**

**Vancouver, BC**

Public Health Research Assistant

**January 2015 - September 2019**

- Conducted rigorous eligibility screening and actively contributed to clinical trials by recruiting participants and collecting data.