Bilin Nong
📞 807-706-7095

🌐 https://bilin22.github.io
✉ bilin.nong@mail.utoronto.ca
⚙ https://github.com/Bilin22

EDUCATION

University of Toronto (St. George Campus)   2021 – 2026
Honours Bachelor of Science - Computer Science & Quantitative Biology & Statistics   ASIP Co-op Program
GPA: 3.95/4.00; Average: A+
Courses: Software Design, Multivariable Calculus, Linear Algebra, Probability & Statistics, Python Programming,
Databases, Survival Analysis, Regression Analysis, Probabilistic Machine Learning, Deep Learning, CS Theory

SKILLS

Technical Skills: SQL, Python, R, Java, Unix Shell, Git, HTML, MS Access, LaTeX, Markdown
Libraries: tidyverse, NumPy, Pandas, Matplotlib, Scikit-learn, PyTorch

EXPERIENCE

Royal Bank of Canada   Toronto, ON
Data Scientist Intern   2024-09 – Present
- Curated business reports for clients using **Python** and **SQL** on IBM Cloud Pak. Created an interactive dashboard using **PowerBI** to deliver an MVP for the trade finance team.
- Automated score five financial emissions (FE) calculations using **Python** for six asset classes.
- Designed a workflow for FE calculation, including EDA, data quality checks, dataset joins, FE calculation, Statistical summary, and validation with Excel implementation.
- Developed maintainable and scalable project code following the **OOP paradigm**.

Data Science Institute @University of Toronto (Link)   Toronto, ON
Research Analyst   2024-05 – 2024-09
- Conducted a **systematic literature review** to evaluate the influence of global diseases on data science methodologies.
- Built **R scripts** to compile datasets, integrating disease burden rankings with data science publication metrics.
- Performed **non-parametric statistical analysis** to analyze disease research trends from 2010 to 2024.
- Applied **hierarchical clustering technique** to build dendrograms and heatmaps for visualizing similarity among journals based on their main research focus.
- Exhibited **scientific communication skills** through delivering a poster presentation on SUDS research day.

Lunenfeld-Tanenbaum Research Institute @Sinai Health (Link)   Toronto, ON
Research Intern   2023-04 – 2024-04
- Co-developed bioinformatic pipelines (TileSeqMave) to quantify the variant effect of genetic mutations and complied benchmark sets of variants from curated extensive literature reviews.
- Incorporated Cohen's D score as a new feature in Quality Control visualizations to assess the separation between nonsense and synonymous variants.
- Leveraged programming skills in **Python** and **R** evaluated the prediction accuracy of different versions of Tileseq pipelines.
- Gained experience in using **GitHub** for version control and collaboration.
- Demonstrated **presentation skills** by delivering a presentation on the methodologies and key findings of this project to the entire lab and authored a comprehensive report.

PROJECTS

Community Safety Application – safeTO   2024-05 – 2024-08
- Collaboratively developed a community safety website (safeTO) that visualizes crime analytics in Toronto neighbourhoods through an interactive city map.
- Designed **Java** classes for the data access and persistence layer using Clean Architecture, including functionality to fetch data via HTTP requests, export data in JSON format, and store user emails in a key-value database.
- Implemented an Email Alert class to send yearly crime reports to users, utilizing the **Builder design pattern** to construct and format email content.
- Applied **Clean Architecture** and **SOLID design principles**, integrating various **design patterns** throughout the project to enhance the web app's maintainability.

Learning Management System Design   2023-09 – 2023-10
- Leveraged **Entity-Relationship** Principle to design a schema for a learning management system database, specifically tailored to support the functionalities of a web app for managing student assignments.
- Developed and executed complex **SQL** queries to facilitate data retrieval and analysis, demonstrating a deep understanding of relational database and SQL intricacies.
- Embedded SQL queries into **Python** using **psycopg2** library, showcasing the ability to integrate SQL with a high-level programming language for efficient data manipulation.
- Conducted testing and validation of database functionalities, ensuring accuracy and reliability of the data, and thereby facilitating insightful analytics for educational management and improvement.