

# Claire Ko

Vancouver, B.C. | 236-992-5696 | lko16@my.bcit.ca | LinkedIn: <https://www.linkedin.com/in/claireko9/>  
Personal Website: <https://claireko18.vercel.app/>

## Summary

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Aspiring Data Analyst with over 6 years of engineering experience and a strong foundation in Computer Science and engineering principles. Skilled in data cleaning, exploratory analysis, and data visualization, with hands-on proficiency in object-oriented programming like Python, SQL, Microsoft Excel, Tableau, Power BI, and relational databases. Proven problem-solving skills and communication skills to collaborate across cross-functional teams. Currently pursuing a bachelor's degree in computer science with an eagerness to learn new techniques.

## Technical Skills

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Languages	Databases	Data Handling	Tools	Analysis
Python	MySQL	Tableau	GitHub/Git	Statistics
R	PostgreSQL	Power BI	Jira	Data Wrangling
C/C#	MongoDB	Microsoft Excel	Confluence	Data Mining

## Personal Projects

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### Data Analyst / Data Engineer | Career Compass Jul 2025

- Built a job-market analytics platform leveraging Python (data cleaning, n-gram NLP), PostgreSQL, and Power BI (DAX measures, dashboards) to deliver matching rates and personalized gap analysis
- Integrated NLP (n-gram analysis) for skill-job matching and delivered interactive Power BI dashboards with intelligent recommendations

### Data Analyst / Data Engineer | Weather Predict Web App Apr 2025

- Developed a real-time weather data pipeline using Python, OpenWeather API, and EdgeDB
- Applied logistic regression with scikit-learn to predict rainfall probability and visualized trends with Plotly

## Professional Experience

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### Intermediate Quality Assurance Specialist Oct 2023 - May 2024

#### Quality Assurance Specialist Jun 2021 - Feb 2023

Ensemble System Inc., Vancouver, Canada

- Supported user acceptance testing in a detail-oriented manner and analyzed QA test data to uncover defect patterns and trends, which reduced defect rates in the agile software development lifecycle
- Developed reusable test cases linked to key quality metrics, enabling systematic tracking of test coverage

### Process Integration Engineer Aug 2010 - Feb 2017

Taiwan Semiconductor Manufacturing Company Limited (TSMC), Hsinchu, Taiwan

- Analyzed low-yield issues (~20%) across multiple manufacturing fabs using Exploratory Data Analysis in MS Excel (Pivot Table/VLOOKUP), improved the yield by 18% yield and earned customer recognition
- Presented data-driven insights to cross-functional teams and customers, aligning technical strategies for production optimization and new technology development

## Academic Projects

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<b>YouTube Trending Video Analysis</b>	Jun 2024
<ul style="list-style-type: none"><li>Analyzed international YouTube trending video statistics using Python (Pandas, NumPy) and MS Excel to uncover insights on viewer behavior, content popularity</li><li>Visualized key trends using Tableau and MS Excel, including content category performance, likes-to-view ratios, and optimal viewing times, providing actionable insights for digital content strategy</li><li>Performed statistical analysis to compare engagement metrics across categories, and constructed 95% confidence intervals to validate hypotheses regarding viewer interactions and content types</li></ul>	

<b>World Happiness Analysis</b>	Sep 2024
<ul style="list-style-type: none"><li>Performed exploratory data analysis and linear regression using Python and MS Excel on global happiness data to identify GDP, social support, and healthy life expectancy as the top three factors most correlated with happiness scores.</li><li>Built multiple classification models with R—logistic regression (80% accuracy), neural network (84% accuracy), decision tree, and kNN (up to 83.9% accuracy)—to predict country happiness categories and life expectancy levels using normalized multi-factor datasets</li></ul>	

## Education

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<b>Bachelor of Applied Computer Science (Database option), Degree (92% GPA)</b>	Expected. Dec 2027
Diploma of Computer Information Technology (With Distinction)	Jan 2019 – Dec 2020
British Columbia Institute of Technology, Burnaby, BC	
<b>Master of Science in Applied Physics, Degree</b>	Sep 2008 – Jun 2010
Bachelor of Science in Physics, Degree	Sep 2004 – Jun 2008
Chung Yuan Christian University, Taoyuan, Taiwan	

## Volunteer

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<b>On-Site Volunteer   BabyGoRound</b>	Jun 2025 – Present
<ul style="list-style-type: none"><li>Prepared, cleaned, and assembled baby gear to meet safety standards, using specialized tools to ensure quality and functionality</li><li>Supported families by assembling essential baby items based on clients' needs and special requirements, and maintaining a welcoming environment for clients</li></ul>	
<b>Funding Assistant   Vancouver Public Library RoofTop Remix Funding</b>	Aug 2025
<ul style="list-style-type: none"><li>Supported an over 100 attendees fundraising event by guiding guests to seating areas, assisting with event flow, and collecting donation forms, ensuring smooth coordination between attendees and staff</li></ul>	
<b>Usher   Vancouver Short Film Festival</b>	Jul 2025
<ul style="list-style-type: none"><li>Assisted with guest seating, crowd flow, and event coordination, ensuring a welcoming and organized experience for attendees</li></ul>	