

# YING CHEN (ARIEL) LIU

Mississauga, Ontario | [ariel.yc.liu@gmail.com](mailto:ariel.yc.liu@gmail.com) | +1 (905)-617-8719

[Website](#) • [GitHub](#) • [LinkedIn](#) • [LeetCode](#)

## SUMMARY

---

- Well-versed in implementing various **machine learning projects**, especially Computer Vision solutions utilizing **Python**
- Proficient in Azure Stack with expertise in Azure Data Factory and Azure Data Lake, complemented by hands-on experience in data engineering using PySpark and Databricks, gained through real-world projects at a leading accounting firm.
- Experienced in handling roles and responsibilities of various positions alongside full-time education, leading to the development of excellent **time management**, **leadership**, **problem-solving**, and **communication** skills
- Familiar with **learning new technologies and tools** on a tight timeline to meet business needs and client requirements

## TECHNICAL SKILLS

---

**Programming Languages:** Python, C#, Java, C++, JavaScript

**Markup Languages and File Formats:** HTML, CSS, JSON, XML, YAML

**Frameworks and Libraries:** .NET, Keras, TensorFlow

**Database:** PostgreSQL, TSQL, MySQL

**Software Tools/Services:** Azure Data Factory, Azure Data Lake, PowerBI, Jupyter Notebook, PyCharm, Visual Studio, VSCode, Eclipse, Apache NetBeans, Microsoft Office

**Version Control Tools:** Git, GitHub, Bitbucket

**Other Tools:** Figma, PowerDirector, Audacity, Unity, Arduino, Adobe Suite (Illustrator, Photoshop, Premiere Pro)

## EDUCATION

---

**Bachelor of Computer Science**

Aug 2022 - Present

[University of Toronto \(Toronto, Ontario\)](#)

- *Relevant Coursework:* Python Programming, Object Oriented Program Design, Clean Architecture, Data structures and Algorithms

## PROFESSIONAL EXPERIENCE

---

**Data Analyst Intern**

May 2023 - Sep 2023

[BDO LLP - 5<sup>th</sup> Largest Accounting Firm](#)

- Developed and maintained PySpark code within Databricks to successfully deliver client requirements and enhance data processing efficiency.
- Designed, constructed, and rigorously tested data pipelines utilizing Azure Data Factory to ensure seamless data flow and transformation.
- Managed and interacted with client data stored in Azure Data Lake, ensuring data integrity and security.
- Successfully worked on on-premise solutions, leveraging SSIS packages and learning C# programming on-the-job to troubleshoot, adapt, and improve the solution's functionality.
- Demonstrated a proactive approach in resolving solution crashes, continually learning, and applying new skills to maintain project stability and client satisfaction.
- Consistently met project deadlines, demonstrating strong time management skills and commitment to project success.

### Python Programming Instructor

Jan 2023 - Jan 2024

#### Alpha Coding

- Fostered an early interest in programming within youth, created customized lesson plans and educational materials to cater to students' varying skill levels and learning styles.
- Delivered engaging and informative Python programming lessons to students, fostering a strong foundation in coding principles and syntax. Designed and executed Scratch programming workshops, making coding accessible and enjoyable for beginners.
- Facilitated interactive coding exercises and projects to reinforce learning and encourage creative problem-solving.
- Designed and set curriculum objectives to ensure students would end the course with a strong proficiency in the programming language and a new-found passion for technology

### Graphic Designer

Jun 2021 - Sep 2021

#### CryptoChicks Blockchain Education

- Coordinated with the Marketing, Social Media, and Business teams to plan and execute a campaign to boost social engagement
- Designed visual content for the website, Instagram, blog posts, and internal communications
- Wrote and proofread social media posts, website copy, and blog posts
- Worked in conjunction with the Web Development Team to redesign various parts of the CryptoChicks Academy website
- Been a part of various design decisions, planning sessions, and timeline estimates

### Python Programming Instructor

Nov 2020 - Jun 2021

#### CanFly Education

- Fostered an early interest in programming within youth
- Mentored and instructed students on various programming concepts from basic to advanced
- Maintained discipline within the classroom and methodically provided additional resources for learning beyond the classroom

- Worked as a course coordinator to design comprehensive course content encompassing diverse technology subjects, including Python, robotics, and app development, to facilitate effective learning experiences.

### Event Organizer and Teen Ambassador

Sept 2019 - Sept 2020

#### Canada Learning Code

- Helped orchestrate and plan various Canada Learning Code events and workshops across Canada, teaching skills ranging from website development to AI
- Promoted digital literacy across Canada. Inspired Canadians, especially minorities, to learn the skills needed to become critical participants in the future of technology

## PROJECTS

---

### Identifying Food Using Computer Vision

Sep 2021

- Programmed and trained the AI model to an accuracy of **~90%** using **Keras** (Python) in Jupyter Notebooks, and applied **Transfer Learning** using the **InceptionV3** model
- Helped design and develop the app UI in **Flutter**
- Integrated the app with the **TensorFlow Lite** backend

### Identifying COVID-19 Induced Pneumonia with AI

Apr 2020

- Developed and trained a **Convolutional Neural Network (CNN)** using **Transfer Learning** with **Keras** and the **VGG16** model
- The CNN was able to differentiate COVID-19 induced pneumonia from viral or bacterial induced pneumonia with up to **85% accuracy** from chest X-ray data

### Employee Management System

Oct 2021

- Designed and developed the Employee Management System from scratch in **Apache NetBeans** and **Eclipse IDE** (using **Java**)

## CERTIFICATIONS

---

[Responsive Web Design](#), freeCodeCamp

[Computer Vision](#), Kaggle

[Introduction to AI Ethics](#), Kaggle

[Introduction to Machine Learning](#), Kaggle

[Intermediate Machine Learning](#), Kaggle

[Introduction to Deep Learning](#), Kaggle

[Python](#), Kaggle

## EXTRA-CURRICULAR ACTIVITIES

---

- Presented on **Computer Vision** within a **General Assembly** global livestream on data science, machine learning, and neural networks
- Founded the **Woodlands Hack Club** and hosted **Hack the Woodz**, a hackathon with ~140 attendees ranging from experienced to first-time hackers
- Team leader for **FraserHacks. Won the Best Data/Infosec hack** for our machine learning project on predicting pancreatic cancer
- **Winner of SF Hacks Best Beginner Hack.** Built a course platform using blockchain to lower costs and allow for a more direct connection from instructor to students
- **Global Finalist of Destination Imagination (DI)**, a competition with a strong focus on innovation, leadership, and problem solving under stress
- Team leader for the **Technovation App Development Competition**, winning *1st place*
- Robotics team leader in **FLL Regionals**, a robotics championship held by FIRST Robotics Canada. Winning *1st place (2015)*, *2nd place (2016)*, and *1st place (2017)*

## OTHER SKILLSETS

---

### Languages:

- English (**Native**)
- Mandarin Chinese (**Professional working proficiency**)

### Sports Experience:

- Competitive Synchronized Swimming (**5 years**)
  - Competed in the **2018 Ontario Winter Games**
- Competitive Rhythmic Gymnastics (**7 years**)

## APPENDIX

---

### Key Links

Personal Website: <https://arielycliu.github.io/>

GitHub: <https://github.com/arielycliu>

LinkedIn: <https://www.linkedin.com/in/arielycliu/>

### Previous Works

Publications: <https://medium.com/@arielycliu>

Hackathon Portfolio: <https://devpost.com/arielycliu>