YING CHEN (ARIEL) LIU

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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 – 5th 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

Summer Intern   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