

Xin Lei Lin

(438) 765-4255 | xinlei.lin@mail.utoronto.ca | [linkedin.com/in/xin-lei-lin-024230217/](https://www.linkedin.com/in/xin-lei-lin-024230217/) | github.com/xinlei55555

EDUCATION

University of Toronto – St-George, affiliated with Trinity College Toronto, Ontario, CA
Bachelor of Science in Computer Science, and Molecular Genetics – CGPA 3.94 Aug. 2023 – May 2027

- Awards: **C. David Naylor Scholarship**: for a first-year student with **outstanding leadership**. (20000\$)
- Arts and Science Scholar**: for students who have maintained **high academic standing**. (7500\$)
- (Deferred) **UWaterloo President's Entrance scholarship for Software Engineering** (\$2000)

EXPERIENCE

DIRO (Université de Montréal) and Regeneron ISEF October 2022 – September 2023
Research Intern with Professor Houari – 15000\$ in awards at ISEF Dallas, Texas and Montreal, Quebec

- Awards**: Science Fair **winner** and other medals (2x), Hydro-Quebec **First Prize** for Science Fair, Ministry of Economy, Innovation and Technology prize, IEEE **Best Project in IT**, OCTAS Cegep award in IT, and other
- Trained deep learning models (including Dense Neural Networks, CNNs, transfer learning w/ YOLO + ResNet, and LSTM w/ Tensorflow) to translate American Sign Language to English.
- Implemented an algorithm to detect and encode body signs into skeleton (with OpenCV and MediaPipe).
- Web scraping tutorials of American Sign Language (using BeautifulSoup and C++) to extract 1000 hand signs (**30 gb of videos**, treated w/ OpenCV, Numpy and C++!)
- Performed data augmentation (**by a factor of x128**) (with C++, Numpy and Pandas) to obtain the largest dataset for ASL in the world.
- Following the ISEF, we further developed our project with **Professor Houari** through the GPUs at DIRO.
- [ISEF Project Board](#) [GitHub](#) [Demo Video](#)

Haute Tech Orientale May 2022 – September 2022
Frontend Developer Montreal, Quebec, CA

- Designed and deployed from scratch the company's website using JavaScript, HTML and CSS with Bootstrap.
- <https://hautetechorientale.com>

PROJECTS

Re.Live – UofTHacks 2024 (Cohere 1st Prize (1500\$)) | *React, Stable Diffusion and OpenPose* January 2024

- Integrated Cohere RAG, and classification to sift through a dataset of songs and images based on the user's mood.
- Implemented a Stable Diffusion Algorithm with openPose which transposes dance moves onto people in static images, making them dance! Frontend was created with React. [Devpost](#)

SpaCey – UTRA (Best use of Flow & Starknet (1000\$)) | *Tensorflow, C++ and React* January 2024

- Created a 3000 datapoint database, with 3 hand gestures. Reduced the dimensionality of the data w/ mediapipe for pose-tracking (96% accuracy in less than 1 hour for 150 epochs with 2 dropout layers, and 3 DNN layers)!
- Implemented bluetooth control of the rover w/ hand signs and a decentralized exchange for task distribution. [Devpost](#)

DriveSense – HackTheNorth 2023 (Finalist Project) | *PyTorch, React Native, Streamlit* September 2023

- Fine-tuned YOLOv5 and YOLOv8 with PyTorch for 3 computer vision models (1) car plate detection, (2) traffic light colours, and (3) road sign detection. Implemented a backend with Django, hosted on Repl.it.
- Developed a novel car speed algorithm detection with Computer vision, based on the size of the car plate, correlated with GPS data from a React mobile app. Secondary frontend with Streamlit. [Devpost](#)

Classif.ai – STEMistHacks | *React, HuggingFace LLMs* [Devpost](#) June 2023

- Fine-tuned HuggingFace LLMs to summarize videos, and notes into Flash Cards w/ React.

XCHANGE – ConUHacks | *C++, Anomaly Detection* January 2023

- Animated banking data through React, HTML, and CSS. Data analysis and summarization through C++. Usage of density estimation (unsupervised learning) for anomaly detection in banking database. [Github](#)

AIBERT – Science Fair | *Naive Bayes, LSTM, BERT + Flutter (Dart) + SQL* September 2021 – May 2022

- (**1000\$ in awards**) Implemented ML models w/ 10000 messages to detect spam messages.
- Binary search for spam numbers. Mobile dev w/ Flutter. Speech Recognition w/ Python.
- Flutter mobile application which can receive messages, and calls. Flask as REST API on Repl.it. [Github](#)