Kevin Chen

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Education

Master of Science in Applied Computing — *Toronto, ON*

University of Toronto — *Sep 2026 - Jan 2027 (Expected)*

- **Concentration:** AI in Healthcare

Bachelor of Applied Science in Engineering Science — *Toronto, ON*

University of Toronto — *Sep 2021 - Jun 2026*

- **Major:** Machine Intelligence (Machine Learning). Minor: Bioengineering
- **GPA:** 3.95/4
- **Relevant Courses:** Algorithms and Data Structures, Signals and Systems, Machine Learning, Operating Systems, Statistics, Computer Networking, Engineering Biology, Biotechnology and Applied Genomics, Medical Imaging

Technical Skills

Languages Python, C, C++, MATLAB, TypeScript

Frameworks/Tools PyTorch, Scikit-Learn, Wandb, NumPy, Pandas, Slurm, Git, SQL, Linux/Bash, Windows Powershell, Docker, CMake, Tailwind CSS, LaTeX

Experience

Vector Institute — *Toronto, ON, Canada*

Artificial Intelligence Research Intern — *May 2025 – Apr 2026*

- **Skills: Python, PyTorch, Scikit-Learn, Weights & Biases, NumPy, Github, Foundation Models**
- **Project:** *Investigating Gut Microbiome Representation Learning with Transformer-Based Models*
- Designed, implemented, and evaluated **Transformer**-based architectures for **vector embedding** and downstream tasks.
- Ran large-scale experiments, including **ablation studies** and **hyperparameter searches**. Visualized results with **Matplotlib**.
- Designed and ran baseline tests with **XGBoost, Random Forest**, and **Logistic Regression**.
- Presented research at the 2nd Workshop on Computational Advances in Metagenomics Research and Applications, part of the 14th International Conference on Computational Advances in Bio and Medical Sciences (ICCABS).

AMD (Advanced Micro Devices) — *Markham, ON, Canada*

Software Engineering Intern — *May 2024 - Apr 2025*

- **Skills: C++, CMake, Jira, Github, Typescript, PostgreSQL, Tailwind CSS, Docker**
- Worked with **large C++ codebase** and **Object-Oriented Programming** to reduce ticket count and hangs for pre-release drivers and worked with cross-functional teams to deliver a stable, performant driver for RX 9000 **GPUs**.
- Developed full-stack, GitHub-integrated project-tracking tools with a **TypeScript** (React) frontend, a **Django** backend, and a **PostgreSQL** database, styled with **Tailwind CSS**.
- Worked on a project that increased website backend processing capacity by incorporating multithreading libraries. This reduced potential response time and latency by **over 4 times**.

University of Alberta, Department of Statistics — *Edmonton, AB, Canada*

Undergraduate Researcher: Statistical Machine Learning — *May 2023 - Aug 2023*

- **Skills: Python, Pytorch, SQL, Bash command line**
- **Project:** *Intelligent automated exam generation using Topological and Distributional Neural Networks.*
- Processed and analyzed school exam data to support machine learning model development, ensuring data quality and readiness for training.

Teaching Assistant — *Toronto, ON, Canada*

University of Toronto — *Sep 2025 – Present*, *Sep 2023 – Dec 2023*

- **Skills:** Python, MATLAB, Technical Communication
- Teaching Assistant for three undergraduate courses: MAT188 **Linear Algebra**, ESC180 **Introduction to Computer Programming**, and ESC190 **Computer Algorithms and Data Structures**.
- Hosted individual office hours and gave written feedback to students on assessments.

Capital Power — *Edmonton, AB, Canada*

Data Engineering Intern — *May 2022 - Aug 2022*

- **Skills: SQL, Microsoft VBA, Project Management**
- Worked with power plant databases. Created system of plant archival and data storage using internal scripts that reduced required storage by **30%**, and reduced licensing costs by **hundreds of dollars**.
- Designed organizational procedures and documentation for power plant downtime interface, leading to *concrete procedural changes* for all power plant downtimes.

Projects

Semantic Journal *Jan 2024*

Project at github.com/JustinMeimar/semantic-journal

- Intelligent goal setting with LLM prompting to understand better and track your progress.
- My role was working on the GPT-4 integration, using the OpenAI **Python** API.

RealAI *Jul 2023*

Project at github.com/kkcchen/hack-gpt

- **First place winner of HackGPT** out of approximately 10 teams. Cumulative Prize: $1500
- Using OpenAI's API, the application generates a listing matching the user's descriptions for a house. Using a **Pinecone Vector database**, this generated listing is compared to listings on Realtor.ca, and the top matching listings are returned.
- I was responsible for the backend built with **Django** in **Python**.

Reversi Player *April 2022*

Project at github.com/kkcchen/reversi

- Wrote Reversi Player for course project in **C**.
- Solution **beat 93% of classmates'** created players in head-on-head gameplay, out of approximately 200 total projects.

Certifications and Awards

2026	**Vector Scholarship in Artificial Intelligence,** Entrance award recognizing exceptional students pursuing AI master's programs in Ontario. Value $17 500	*Vector Institute*
2026	**2026 Award of Excellence,** Academic Achievement of a 3.9 cGPA or higher during first seven semesters of undergraduate career.	*University of Toronto*
2026	**Vector Research Internship,** Research Grant. Value $15 000	*Vector Institute*
2023	**Reinforcement Learning Specialization,** University of Alberta and Alberta Machine Intelligence Institute	*Coursera*
2023	**Hackathon First Place: HackGPT,** First Place Large Language Model themed hackathon winner. Value $1500	*Edmonton, Canada*
2023	**NSERC USRA,** Undergraduate Summer Research Award at the University of Alberta under the Department of Mathematical and Statistical Sciences. Value $8400	*University of Canada*
2022	**Paulin Memorial Scholarship,** Awarded for High Standing in First Year Engineering. Value $1200	*University of Toronto*
2021	**Faculty of Applied Science and Engineering Scholarship,** U of T Engineering Entrance Scholarship. Value $5000	*University of Toronto*