ERIC KEILTY

🏠 Greater Toronto Area 📞 603.970.1800 ✉ epkeilty@gmail.com

in linkedin.com/in/ekeilty 🌐 erickeilty.com ○ github.com/ekeilty17

Curious, passionate, detailed-oriented, and motivated **Masters of Applied Science graduate in Computer Engineering** from the **University of Toronto** currently working as a **Data & AI Delivery Consultant** at **IBM**. Extensive work experience in full-stack AI development across multiple domains including small start-ups, academia, and established corporations. Consistently sets the standard for excellence by leading through action, fostering a culture of high performance, and delivering results that exceed expectations.

PROFESSIONAL SKILLS

- Python / PyTorch / TensorFlow
- SQL / Tableau
- Javascript / React
- C / C++

- Complex Problem Solving
- Public Speaking / Interpersonal
- Data Visualization / Simple Explanations
- Adaptability / Flexibility / Capacity

EDUCATION

Master of Applied Science - University of Toronto
Department: *Electrical & Computer Engineering*
Supervisor: *Andreas Veneris*
2021 - 2023

Bachelor of Applied Science - University of Toronto
Major: *Engineering Science – Machine Intelligence*
CGPA: *3.96*
2017 - 2021

St. Thomas Aquinas High School
GPA: *4.46 (Valedictorian)*
2013 - 2017

WORK EXPERIENCE

Data & AI Delivery Consultant - IBM   **May 2024 - Present**

- Designed and delivered AI solutions using IBM's watsonx platform.
- Key contributor to the development of the ups.com chatbot, including designing and implementing the "Delivery Change Request" flow, which became the sole revenue-generating flow for UPS.
- Implemented a Retrieval-Augmented Generation (RAG) solution for Dillard's legal team, enabling rapid access to legal documents partitioned by individual store locations.

Technical AI/ML Product Manager - Extropolis (Startup)   **May 2023 - May 2024**

- Generated a new revenue stream, as measured by 10% increase in users, acting as the product manager and lead developer of a new web application for AI image generating.
- Spearheaded an agile development process by collaborating with beta testers to proactively identify and prioritize bugs, facilitating rapid response and continuous improvement.

Head Teaching Assistant of Algorithms Course - University of Toronto   **Sep 2022 - Dec 2022**
Sep 2023 - Apr 2023

- Prepared and delivered weekly lectures to classes of over 100 students.
- Created the course assignments, midterm, and final exam.
- Led a team of 15 tutorial and grading TAs, ensuring timely completion of necessary tasks.
- Moderated a message board of over 300 students, responding to 400+ questions each semester.

AI/ML Intern Analyst - Salesforce
Sep 2020 - Dec 2020

- Utilized NLP techniques and fine-tuned pre-trained models to analyze internal customer correspondences to improve existing customer support chatbot.
- Led a team of 3 interns, spearheading the architecture and solution methodology, achieving results and insights beyond expectations.

NLP Researcher - University of Toronto
May 2020 - Sep 2020

- Fine-tuned pre-trained BERT and GPT-2 models in both PyTorch and TensorFlow to create a chatbot designed to have Motivation-Interviewing style conversations.
- Configured and hosted user testing server on a Google Cloud virtual instance to test chatbot performance using a study with participants from prolific. Received higher quality scored compared to previous models.

Full Stack AI/ML Developer - AskVoco (Startup)
May 2019 - Jan 2020

- Implemented Text-to-Speech and BERT for automatic categorization of audio content, integrated as an Alexa Skill to provide Alexa users with more personalized content.
- Designed company website connected to a firebase database to host audio content, audio metadata, user accounts, and user metadata. Created an RSS parser to get audio content from users.

Java Backend Developer - DNAStack
May 2018 - Aug 2018

- Received the internship through the 2018 Google Summer of Code program.
- Collaborated with the Global Alliance for Genomics and Health (GA4GH) to create and implement a standardized API for genomics health data. The API was created using the Java Springboot framework, integrated with a MySQL database, packaged with Maven, and authenticated with Keycloak.

Jun 2015 - Aug 2015
Jun 2016 - Aug 2016
Programmer - University of New Hampshire

- Developed C++ libraries for sonar equipment to model refraction in the sound speed profile, resulting in increased efficiency compared to the previous software.
- Created a graphical interface in Cesium.js for mission planning of autonomous robotic boats.

ACADEMIC PUBLICATIONS

Natural Language-Based Model-Checking Framework for Move Smart Contracts
10th International Conference on Software Defined Systems (IEEE SDS 2023)

Gas Optimization in Move Smart Contracts on the Aptos Blockchain
5th Conference on Blockchain Research & Applications for Innovative Networks and Services (IEEE BRAINS 2023)

A Model-Checking Framework for the Verification of Move Smart Contracts
13th International Conference on Software Engineering and Service Science (IEEE ICSESS 2022)

Automated Auditing of Price Gouging TOD Vulnerabilities in Smart Contracts
International Conference on Blockchain and Cryptocurrency (IEEE ICBC 2022)

AWARDS & ACHIEVEMENTS

- **Best ECE Teaching Assistant Award**
- Shortlist of TATP TA Teaching Excellence Award

2023

- **Award of Excellence** – 3.9 CGPA or higher in all semesters of undergrad
- University of Toronto Scholar

2021

- **NSERC Research Grant**

2020

- 1st place in UtraHacks hardware hackaton
- 3rd place in semester-long Autonomous Robot design and construction project

2019

- Ranked #1 in the Engineer Science program – highest GPA and course average
- Fujino/Smith Emergence Scholarship

<div align="right">2018</div>

- **Valedictorian** – highest GPA in high school
- **National AP Scholar Award** - score 4 or higher on 8 or more exams
- **Scholar Athlete Award (Student Athlete of the Year)** - out of 20+ NH/ME Seacoast high schools

<div align="right">2017</div>

LEADERSHIP EXPERIENCE

President of the University of Toronto Magic Club   2018 - 2019

Hosted weekly meetings open for anyone to attend, taught and preformed card magic, and discussed general principals and philosophy of magic.

Organizer of SKULE Engineering Intramural A Hockey Team   2018 - 2019

Each year, helped recruit students to join the team and schedule games against other departments.

SKULE F!rosh Leader   2018

During orientation week (F!rosh week) incoming undergraduate students participate in a wide variety of social and academic events. As a F!rosh leader, I was responsible for a group of around 40 students, guiding them through planned activities and ensuring a fun, but also safe and accepting environment.

Captain of Varsity Hockey Team   2016 - 2017

Captain of Varsity Golf Team   2015 - 2017

VOLUNTEERING

Toronto International Film Festival (TIFF) Volunteer   Sep 2018 and Sep 2019

Helped direct people to the appropriate destination, deal with any conflicts during film showings, and ensure a smooth operation of the festival.

Peer Tutor   2016 - 2017

During my break periods and after school, I aided younger students with their course work and assignments.

Dover Hockey Arena Pink Game Organizer   Feb 2016 and Feb 2017

The "pink game" is a fundraiser for breast cancer. As the captain of my hockey team, I helped organize fundraising events such as bake sales and silent auctions, as well as playing in the game.

Wentworth-Douglass Hospital Volunteer   Sep 2015 - Dec 2015

Worked in the Center for Pain Management creating schedules, preparing charts, and checking-in patients.