ERIC KEILTY

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Curious, passionate, detailed-oriented, and motivated **Masters of Applied Science graduate in Computer Engineering** from the **University of Toronto** with 4 summers of work experience in AI development including multiple start-ups, an internship with Salesforce, and additional experience in full-stack development. Proven ability to lead teams, manage people, and consistently deliver high-quality presentations through 2 years of teaching and running a university course. Currently pursuing a career in the field of AI/ML.

PROFESSIONAL SKILLS

- Python / PyTorch / TensorFlow
- SQL / Tableau
- Javascript / React
- C / C++
- Complex Problem Solving
- Public Speaking / Interpersonal
- Data Visualization / Simple Explanations
- Adaptability / Flexibility

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

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)

RELEVANT EXPERIENCE

Full Stack AI/ML Developer - **Extropolis**
May 2023 - Present

- Utilizing large language models (GPT-4, LLaMA, etc) and prompt engineering to create helpful and personalizable assistants.

Head Teaching Assistant - 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 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

- Implemented pre-trained BERT and GPT-2 models in both PyTorch and TensorFlow in 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
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.

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

- 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.

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

2018

- **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

2017