

# JUSTIN TRAN

Justinb.tran@mail.utoronto.ca | 416-948-2509

[linkedin.com/in/justin-tran-816199165/](https://www.linkedin.com/in/justin-tran-816199165/) | [github.com/JustinBTran](https://github.com/JustinBTran) | [justinbtran.github.io](https://justinbtran.github.io)

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## Education

**University of Toronto**

Engineering Science- Bachelor of Applied Science (BASc)

*Major:* Machine Intelligence

**September 2018 – June 2023(Expected)**

Toronto, Ontario

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## Courses Taken

**Computer Science** Data Structures and Algorithms (**A**), Relational Databases (**A+**), Systems Software (**A**), Introduction to Machine Learning (**A**), Artificial Intelligence (**A+**), Digital and Computer Systems,

**Mathematics** Probability and Statistics (**A**), Multivariable Vector Calculus, Discrete Math, Linear Algebra

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## Experience

**Ontario Teacher's Pension Plan – Solutions Engineering**

**May 2021-Present**

Software Development Intern

Toronto, Ontario

- Reduced deployment time by 95% by creating CI/CD pipelines for 11 different teams, to automatically deploy and test code changes using Jenkins, Python, and C#
- Streamlined the build configuration process for over 50 developers by implementing a full stack web application using React, Flask, and IIS
- Facilitated communication between 24 developers by implementing a notification system to send Microsoft Teams messages to 5 development teams regarding the results of nightly continuous integration builds
- Rated the top co-op student out of 5 all time co-ops within my engineering department

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## Coding Projects

**Deep Learning Fiction Writer**

**January 2021**

- Developed an AI-based WebApp which uses the beginning of a fiction story as an input and outputs a continuation of the story, using PyTorch, Flask, React, and Typescript
- Utilized transfer learning and the GPT-2 Transformer to train a model on a dataset of over 1000 fiction stories
- Model performed 120% better than baseline GPT-2 in generating fiction continuations according to feedback from 41 Users

**Job Board**

**August 2020**

- Designed and created a WebApp using React.js which matches users with jobs based on their marketable skills.
- Used a MySQL server to store job data aggregated from Indeed.com, ZipRecruiter.com, and StackOverflowJobs.com.
- Hosted a RESTful API sever with Express.js and ran backend services through Node

**Chess, Chess Player**

**June 2020**

- Designed and programmed a 1300 ELO Chess AI using C++, as well as a full-stack fully functional chess desktop app complete with castling, enpassant, and unit promotion
- Improved upon the Min-Max, Alpha Beta pruning algorithm by leveraging dynamic programming, multi-processing, hash table, and sorting to reduce computational time of decision tree traversal by 1000%
- Depth 4 traversals are done in under 10 seconds, and depth 5 traversals are done in less than 1 minute

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## Skills

**Languages**

Python, Java, C++/C, Web (HTML5/CSS3/JavaScript), Typescript, C#, Assembly (ARM)

**Frameworks/Tools**

Git/Github, Django, React, SQL, Node.js, Express.js, Windows, Linux, Unix

**Machine Learning**

TensorFlow, Keras, PyTorch, Transformers, Scikit-learn, NumPy, Pandas, TensorBoard