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**THOMAS NGUYEN**

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(647) 608-1310  
Toronto, Ontario

**Education**

**B.A.Sc. Computer Engineering**

University of Toronto | Toronto, ON

Graduation with Honours

**CGPA:** 3.64

**Minor:** Bioengineering, AI/ML

**Skills**

**Languages**

* Java
* C, C++, C#
* Python
* JavaScript (Node, Angular)
* SQL
* Kotlin

**Tools**

* AWS (EC2, Cloudfront, Lambda)
* Apache (Maven, Camel, ServiceMix)
* Salesforce.com (Apex)
* Microsoft ASP.NET
* Spring
* Tensorflow, PyTorch
* Flask, Docker

**Coursework**

­Algorithms & Data Structures

Computer Networks

Databases

Operating Systems

Machine Learning

**Interests and Activities**

**Dragonboat**

* Club Crew World Championships 2018 (Szeged, Hungary)
  + 8x Gold medalist
  + 2x Silver medalist
* Team Canada 2021 (Hopeful!)

**Lifeguarding & Swim Instructor**

* Standard First Aid Instructor
* Advanced Swim Instructor

**Avid NBA Fan!**

**Experience**

**Agile Software Developer (Full Stack, Salesforce)** May 2019 to August 2020

*407 ETR Concession Company | Toronto, ON*

* **Highway Assets Project**
  + Developed external web application that interfaces with Infor Enterprise Asset Management (EAM) software to manage contractor work orders.
  + Built front-end using AngularJS, middleware using Apache ServiceMix ESB layer with Camel routing, Java (Spring Boot) and C# (.NET 4.5) microservices.
  + Developed RESTful APIs and optimized performance by over 100% when viewing over 500 work orders.
  + Integrated with AWS (Cloudfront, S3, Cognito, API Gateway, Lambda).
* **Salesforce.com** 
  + Developed custom Lightning Web Components (LWCs) for Salesforce.com Lightning Environment.
  + Developed a LWC to display customer trips gathered from SAP with client-side filtering and pagination.
  + Integrated said components with SAP database of over 1.5 million entries.
  + Scripted Salesforce.com automated tests in a variety of environments, including Provar, Askida CT, Selenium IDE, and Telerik Test Studio.
* **407 ETR Website**
  + Performed optimizations on the JavaScript-based 407 ETR Toll Calculator; improved performance by 25%.
  + Maintained and performed regular enhancements for the 407 ETR website.

**Summer Research Student** May 2018 to August 2018

*Toronto Rehabilitation Institute – Lyndhurst Centre | Toronto, ON*

* Developed a coaching system for functional electrical stimulation (FES) rowing designed for patients with partial spinal cord injuries.
* Used Python and a National Instruments Data Acquisition Unit (NI DAQ) breakout box. Tests to determine accuracy performed using motion capture software.
* Publication: [bit.ly/FesRowing](http://bit.ly/FesRowing)

**Projects**

**ForeSight – ML Medical Screening Android App** September 2020 – May 2021

*Flutter, Python, PyTorch, Flask, AWS EC2, Docker*

* 4th year capstone design project. Created an Android app that screens potential medical conditions to motivate users to seek medical attention when required.
* Achieved final testing accuracy of 86% by training on 5207 images of skin conditions, including nail fungus, basal cell carcinoma, and melanoma.
* Final machine learning model was exported via Docker to be hosted on AWS EC2, and accessed via a mobile app created using Flutter.
* GitHub: [bit.ly/ece496codebase](http://bit.ly/ece496codebase); PlayStore: [bit.ly/ece496foresight](http://bit.ly/ece496foresight)

**KLARR NET – Facial Emotion Recognition** September 2020 – December 2020

*Python, PyTorch*

* Designed, trained, tested an ML model to classify 7 emotions using a webcam.
* Detected faces via Viola Jones algorithm, trained on a dataset of >36’000 images.
* Achieved a final testing accuracy of 52.6% prior to using transfer learning.
* GitHub: [bit.ly/klarrnet\_ml](http://bit.ly/klarrnet_ml)

**Simple Maps – Geographical Information System** January 2018 to May 2018

*C++*

* Developed GIS/GUI to display city spatial data with text prediction & auto correct.
* Implemented: Dijkstra, A\*, greedy, random 2-opt, multithreaded, simulated annealing.