

Erik J. Derohanian

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Skills

- Languages** Python, Golang, Javascript, Typescript, Bash, Matlab, Latex, Scheme
- ML & Data sci** PyTorch, Tensorflow, Huggingface, Scikit-learn, SQL
- Web** Django, Flask, Apollo Server (GraphQL), Express
- Etc** Docker, gRPC & Protobuf, ElasticSearch, Logstash, Redis

Education

University of Waterloo

BASC. IN SYSTEMS DESIGN ENGINEERING

Waterloo, Canada

Class of 2017

Experience

Backend Software Developer

CORELOGIC INTERSECT • CONTRACT

Toronto, Canada

Dec 2020 » June 2021

- Led the design and development of a **custom rule engine** for validating insurance process logic cleanly and in an easily testable way
- Worked on and helped deliver multiple **Golang** microservices communicating over **gRPC**

Fullstack Software Developer

H&M GROUP • CONTRACT

Toronto, Canada & Berlin, Germany

April 2020 » Dec 2020

- Rewrote unstable and slow backend components using modern technologies (**Flask, Apollo Server**)
- Simplified developer experience by combining multiple services into single **GraphQL** backend
- Wrote translation service to translate and cache incoming product data in realtime (**Python, Docker**)

Lead Developer / ML Developer

BHT.AI

Toronto & Guelph, Canada

August 2018 » April 2020

- Designed **horizontally scalable machine learning pipeline** that **autoscaled** based on quantity of input data to provide consistent processing times (**Python, Redis, Docker**)
- Developed and improved machine learning models for NLP tasks on healthcare data
- Investigated various image processing techniques and neural network architectures to extract data from documents
- **Hired and led** product and ML development teams, **mentored** junior team members

Fullstack / ML Developer

COUBAN SOFTTHING

Toronto, Canada

May 2017 » August 2018

- Developed features to view and search log data on both the backend and frontend using **Django** and **React**
- Contributed to **Elasticsearch** and **Logstash** pipeline by designing new filters and mappings to enable better data streaming
- Investigated a range of ML models and evaluated their use and potential for driving new products

Machine Learning Software Engineer

500PX • INTERNSHIP

Toronto, Canada

May 2016 » August 2016

- Investigated neural network topic modeling methods of **sorting image search results** based on relevance using **Tensorflow**
- Created product to search images matching user paintings in real-time (**Golang**)
- Contributed to user activity data pipeline (**Python, Luigi**)

Software Security Developer

LYRICAL SECURITY • INTERNSHIP

Toronto, Canada

Jan 2015 » Dec 2015

- Implemented cryptographic hashing to develop native **intrusion detection software**
- Developed the frontend for vulnerability reporting software (**AngularJS, semantic-ui**)
- Worked with several cloud providers to augment security controls

Web Developer & Test Engineer

AUTODESK, A360 TEAM • INTERNSHIP

Toronto, Canada

May 2014 » Aug 2014

- Developed **integration testing framework** to verify cross-platform UI generation
- Created image processing code in python to verify accuracy of **WebGL rendering**
- Improved **3D camera navigation** interactions for CAD models (**Javascript**)
- Increased code quality by adding substantial test coverage

Bioinformatics Software Developer

ONTARIO INSTITUTE FOR CANCER RESEARCH, JBROWSE PROJECT • INTERNSHIP

Toronto, Canada

Sept 2012 » Dec 2012, Sept 2013 » Dec 2013

- Created mockups and implemented new UI based on **user testing (Javascript, Dojo Toolkit)**
- Added support for **new genomics file formats**
- Improved reliability by writing **unit and integration tests (Jasmine, Selenium Webdriver)**
- Improved CSS to enable better cross-browser rendering

Medical Image Processing

SUNNYBROOK HEALTH SCIENCES CENTRE • INTERNSHIP

Toronto, Canada

Jan 2012 » April 2012

- Wrote **image processing** code for analyzing the health of patient hearts through MR imaging (**MATLAB, C++**)
- Detected healthy and unhealthy regions of heart tissue, then generated a **3D VTK model** of the heart based on processed data
- UI / UX design for several internal applications