Ivan Zhang
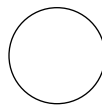## Go && Deep Learning

github.com/1vn
ivan@ivanzhang.ca

Experience

Backend Developer
Vision Critical / Pressly (Nov *2017 — Present*)

- Implemented synchronization system for caching slow user facing endpoints (17s average response time -> 100ms, synchronizes 1mil+ entities daily).
- Designed and implemented API client for integrating the Pressly backend with legacy Vision Critical services (data deletion, authentication)
- Wrote robust PostgreSQL queries for performing mission critical database migrations while minimizing service interruption
- Built tools and automation to support cloud operations team for streamlining deployments

Software Developer
Ranomics (Nov *2015 — Oct 2017*)

- Wrote and designed the entirety of the software stack for customers around the world to access our genomics datasets to give faster and better cancer diagnostics
  - High-profile users: BGI (3rd of Top Institutions in Nature and Science), Veritas (U.S.)
- Enabled revenue-sharing partnerships by building an OAuth2 RESTful API
  - Integration on the 3rd-party platforms gained exposure to 400+ European hospitals
- Architected infrastructure, and designed repeatable and simple deployment processes on AWS
- Built proprietary scientific codebase to optimize our in-house lab processes

Research

FOR.ai

- Independent distributed deep learning research group
- Implement experimental research ideas in dropout, model pruning and adversarial defense using Tensorflow
- Set up, maintain, and continuously improve upon the Google Cloud Platform infrastructure we run all our experiments on
- Designed architecture optimizing for ephemeral GPU instances to reduce cost, and an underlying NFS which provided ease of use for researchesr
- Refactored internal codebase to minimize manual configuration by enforcing environmental assumptions and integrated TPU workflow.

Publications

- **CipherGAN: Unsupervised Cipher Cracking Using Neural Networks (ICLR 2018, NIPS 2017 DISCML)** - A. N. Gomez, S. Huang, I. Zhang, B. M. Li, M. Osama, Ł. Kaiser
- **Targeted Dropout (NIPS 2018 pending review)**, A. N. Gomez, I. Zhang, K. Swersky, Y. Gal, G. E. Hinton

Tools

Go
Python/Tensorflow
PostgreSQL
Amazon Web Services
Google Cloud Platform

Education

University of Toronto St. George
Bsc. Computer Science
2014—2016
Leave of Abscence