SOOHAM RAFIZ

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EXPERIENCE

IP Development Engineering Intern

Intel Corporation

06/2017 - 09/2018 San Jose, California

Intel holds market dominance on desktop class microprocessor sales.

- Migrated Intel's deep-learning accelerator framework, OpenVINO, across backwards-incompatible updates to developer environment and infrastructure. This task required cross-functional coordination with my team, sysadmins, and hardware engineers.
- Reduced OpenVINO Quartus build time for extremely large CNN (i.e ResNets, VGG) models by 30% for smoke tests and weekly regression tests. This alleviated the number of engineers waiting overnight for build completion.
- Developer for LDPC 5G codec IP compatible with 3rd Generation Partnership Project (3GPP) standard of 5G cellular communications for clients such as Huawei.
- Added Cyclone FPGA support to Quartus' digital signal processing (DSP) portfolio of hardware IP.
- Migrated DSP legacy synthesis, placement-routing, and verification tests to new testing framework.
- Technical editor and reviewer for "Intel Quartus User Guides" of above software; provided clients factual and legitimate documentation.

Avionics Engineer

University of Toronto Aerospace Team, Rocketry Division

09/2016 - 05/2017 Toronto, Ontario

Developed software for reading flight-critical sensors using Arduino, ICs, and digital filters.

Web Development Intern

Careerleaf Inc.

07/2016 - 09/2016 Toronto, Ontario

Careerleaf provides job posting boards (a la Indeed) as a service.

- Developed and deployed a job management module using AngularJS.
- Improved site reliability by writing unit tests.
- Liaised with development team and product manager to fulfill client requests regarding UI, backend, and job analytics.
- Authored Quality Assurance tests for single-sign-on (SSO) functionality.

EDUCATION

B.Sc in Computer Science

University of Toronto

08/2014 - 05/2019

GPA **3.14** / 4.00

- C.L Burton Open Scholarship recipient (award is competitive)

ML PROJECTS

im2latex (Computer Vision)

im2latex is a seq2seq model with attention designed to transliterate images of math formulas to LaTeX code.

Adversarial image generation

Based "Explaining and Harnessing Adversarial Examples" by Goodfellow et al., this neural network generates images to fool other neural networks.

VAE for image segmentation

I designed my own conditional variational autoencoder for the task of image segmentation on the MS-COCO dataset. Hosted on github.

TECH. SKILLS

Scientific python packages:
numpy, scipy, NLTK, pandas, tensorflow, caffe.

Deep Learning: LSTMs, CNNs, RNNs, Probabilistic Graphical Models, MCMC, VAEs.

Languages: C, C++, Java, Python, Scala, Perl, Shellscript

Excellent Knowledge of Data Structures.