

Muhammad Gill

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EDUCATION

- **University of Waterloo** Waterloo, ON
Computer Engineering (Bachelors) *September 2016 - April 2021*

EXPERIENCE (MOST RECENT 3)

- **Google** Mountain View, California, USA
Software Developer *September 2019 - December 2019*
 - Wrote a massive data processing pipeline to generate various text datasets.
 - Used various clustering techniques to label unlabeled text datasets.
 - Pretrained BERT encoder on large volumes of english text using cutting edge parallel TPU technology.
 - Optimized database queries to run on Googles parallel query engine, reducing runtime by over 80%.
 - Modified BERT transformer to be used with an MLP in order to classify text post-encoding.
 - Achieved unprecedented precision classifying wikipedia text using a custom, modified transformer model.
 - Authored a research paper: Text Object Ontology, in which I present state of the art results in Text Classification.
- **Google** Montreal, Quebec, Canada
Software Developer *January 2019 - April 2019*
 - Wrote, and deployed (to hundreds of servers) a parallel label propagation algorithm to label unlabelled data samples.
 - Independently designed and implemented semisupervised learning pipeline for very large security datasets. Initial, unoptimized models realized accuracy and F1 scores above 98%.
 - Wrote custom evaluation binary to score the semi-supervised and unsupervised models.
 - Wrote a custom node transformation binary to generate new datasets.
- **Blackberry** Waterloo, Ontario, Canada
Software Developer *May 2018 - August 2018*
 - Developed deep learning model for syntax conversion from PL/SQL (oracle) to MySQL (100% precision).
 - Developed and optimized dynamic scripts to efficiently and securely migrate over 20% of company databases (schema, procedures and data) between different, incompatible platforms.
 - Customized, optimized an open source MySQL DB (MariaDB) to increase insert speed by 12%.
 - Contributed greatly to many other confidential projects, currently being deployed to millions globally.
- **Personal Projects** *Feb 2011 - Present*
Software Developer
 - Wrote a model to accurately predict stock price volatility using financial derivative (options) flow.
 - Independently developed 3200+ elo chess engine (neural network). Trained using self generated dataset (90+ million unique chess positions).

SKILLS

- **Operating Systems:** Linux (Debian/Ubuntu), macOS, Windows
- **Languages:** C++, Python, Java, SQL, Bash, Javascript
- **Technologies:** Tensorflow, scikit-learn, .NET, Node.js, ASP.NET, MATLAB, Hadoop, Express.js
- **Tools:** Git, XCode, Visual Studio, Eclipse, VS Code, Azure, MySQL, MariaDB, MongoDB, AWS