gohurali@uw.com
425-770-0031

Gohur Ali

github.com/gohurali
linkedin.com/in/gohurali
gohurali.github.io

Education

Bothell, WA **University of Washington** **Fall 2016-June 2020**

B.S. in Computer Science & Software Engineering
3.83 GPA Annual Dean's List 2016-2017; Annual Dean's List 2017-2018
Current Coursework: Machine Learning, Statistical Learning for Machine and Deep Learning, Analysis and Design
Past Coursework: Operating Systems, Database Systems, Data Structures, Algorithms, and Discrete Math I & II, Space Operations & Systems Engineering, Software Engineering, Management Principles for Computing Professionals, Programming Issues with OOP Languages, Technical Writing for Computing Professionals

Experience

Software Engineering Intern **AVA.Retail.ai** **Sept 2018-February2019**

- Developed fully automated synthetic data generator for training object detection model using Python and Blender
- Training and improving object detection model using diverse synthetic data in TensorFlow
- Supervising/debugging loss and learning rate for object detection model and pose estimation model in TensorBoard
- Shell scripts for task automation such as updating model checkpoint files and general file/directory operations.
- Created support vector machine model using Scikit-Learn for object classification and detection for R&D purposes
- Working closely with QA team to discover and resolve software defects with test-driven development

Fine Jewelry Consultant **Macy's Fine Jewelry** **June 2016-Sept 2018**

- Learned about various intricacies of the jewelry business and product knowledge on precious stones, metals, and fine watches
- Managed an over a million-dollar inventory on a day to day basis
- Worked with customers on different levels to improve customer satisfaction
- Trained new associates within the department
- Improved to be more efficient in our inventory control process

Teaching Assistant **Robot U** **2015-2016**

- Taught 4th Grade students the basics of programming in Lego Mindstorms EV3 Programming Software
- Analyzed and debugged code to aid student understanding of the fundamentals of visual programming
- Supervised and helped students who needed directions on building the robot
- Provided directions and assisted with the predefined project

Projects

Vehicle Detection **November 2018-Present**

Gathered, labeled, and prepared vehicle and obstacle image data. Developed a ConvNet architecture for classification in Keras. Preparing bounding box training image data synthesis and TFRecords for data storage & quick model training.

Object Segmentation **October 2018-Present**

Using Python and OpenCV, developed a script using image thresholding to segment objects from background. Looking into a deep learning use-case in the future. Renders 40-60% of usable image data from an input image directory.

MySQL Vaccine Database **July 2018 – August 2018**

Designed and implemented a database with MySQL for tracking patient, hospital, staff, and vaccine data. Built Object Role Modeling and Logical Data Model diagrams to examine and design pertinent entities for the database. Created and designed a web application using HTML, CSS, and PHP to connect and display database data and allow for data manipulation.

File System in Java **July 2018 – August 2018**

Implemented a file system command processor based of the original file system in Unix. The user is able to format, create, modify, delete blocks and files. It implements three primary data structures: bit-map to represent a disk, Inode list, and map of files on disk. Implements a simple command processor that parses command strings and redirects to the given command.

File Compression/Decompression using Huffman Coding Algorithm **May 2018**

Implemented a priority queue that holds contents of a text file and creates a Huffman Tree. Using bit manipulation, created coded symbols and wrote pertinent information for the encoded file. Implemented a decoder that recreated the original file using a personal implementation of a bit reader.

Research Experience

Undergraduate Researcher **University of Washington Bothell Dept. of Computer Science** **September 2018-Present**

- Working with Dr. Arkady Retik to automate skill evaluation by developing a deep learning architecture pipeline
- Using natural language processing and word data mining using embedding generators such as Word2Vec and GloVe
- Developed a convolutional neural network in TensorFlow & Keras for skill phrase/sentence classification (97% Accuracy and less than 100 milliseconds for inference).
- Implementing a character level ConvNet for comparison, inspired by Zhang et al.(arxiv.org/abs/1509.01626)
- Applying statistical methods and evaluation metrics to analyze CNN results and performance
- Utilizing TensorBoard for visualizing the computation graph of data flow & model evaluation

Languages & Systems

Advanced	Intermediate	Familiar
Python, Java, C++, Git, Linux	Bash Script, R, HTML, MySQL	LaTeX, C, CSS, PHP