Shihan Ai

Phone: +1 (416)-986-5368
Email: g3aishih@gmail.com
GitHub: https://github.com/g3aishih
Portfolio: https://g3aishih.github.io/
LinkedIn: https://www.linkedin.com/in/aishihan

EDUCATION

University of Toronto **Sept 2012 – June 2017**

Honours Bachelor of Science with Distinction, Computer Science, Specialization in Artificial Intelligence
Major GPA: 3.58/4.00 (CGPA: 3.40/4.00)

TECHNICAL SKILLS

Languages: Python, Java, C++, C, MATLAB, HTML, CSS, JavaScript, SQL, Bash

Technologies: NumPy, OpenCV, TensorFlow, NodeJS, React, MongoDB, MySQL, Git, Docker

PROFESSIONAL EXPERIENCE

IBM, Software Engineer Intern **May 2015 – Aug 2016**

- Designed the backend of a central analytics platform for IBM dashDB using NodeJS and IBM DB2
- Created infographics using D3.js with live data from dashDB and provided managers with real-time analytics
- Analyzed the collected data with NLP and identified the pain points that customers had with IBM dashDB
- Developed a tweet scheduler with NodeJS and DB2 to automate the promotion of IBM DB2 on Twitter
- Automated the collection of video analytics from YouTube using Python and generated infographics using D3.js to capture the effectiveness of IBM DB2 promotional videos on YouTube

University of Toronto, Research Assistant **May 2014 – Aug 2014**

- Created a script with Python and NLTK that can attach semantic meaning to unstructured web data using NLP
- Built a Twitter bot with Python that can respond to movie related tweets with showtimes and recommendations
- Performed lexical analysis on tweets to understand the structure of natural language on social media

PROJECTS

Optimized Interactive Foreground Extraction **June 2017 – July 2017**

- Engineered a Computer Vision algorithm using Python, NumPy, and OpenCV that can classify pixels in an image as either the foreground or the background of the image
- Independently researched and implemented methods to decrease processing time when processing HD photos
- Performed benchmark tests against traditional foreground extraction methods such as GrabCut and improved the processing time of 12-Megapixel (3024 x 4032) images from an average of 74 seconds to 3.6 seconds

Exemplar-Based Image Inpainting **May 2017 – June 2017**

- Independently researched and implemented a Computer Vision algorithm in Python, NumPy, and OpenCV that can crop out user defined areas in an image and replace the cropped-out areas with visually plausible textures
- Analyzed and identified the optimal hyper parameters to produce results with little or no optical artifacts
- Identified and applied the algorithm to real world applications such as acne removal in digital photos

Image Classification Kaggle Competition **Nov 2016 – Dec 2016**

- Created an image classifier with transfer learning by retraining the classification layer of Google's Inception to classify images of structures, indoors, people, animals, plants, food, cars, and seas
- Trained the CNN with 7000 test images and experimented with hyper-parameters to achieve a peak accuracy of 83% on the validation set
- Tested the CNN with 2970 test images and achieved an accuracy of 78.9% and placed top 15% in the Kaggle competition