

TANISHKA SINGH

1207 E 8th St Tempe, AZ 85281

+16506952430 [◇ tsingh22@asu.edu](mailto:tsingh22@asu.edu) [◇ linkedin.com/in/tanishka-singh-2765a4a2](https://www.linkedin.com/in/tanishka-singh-2765a4a2)

[◇ github.com/tanishkasingh9](https://github.com/tanishkasingh9) [◇ twitter.com/tanishkasingh](https://twitter.com/tanishkasingh)

EDUCATION

Arizona State University, Tempe Campus

Master of Computer Science

August 2018 - May 2020

GPA 3.20

National Institute of Technology, Raipur

Bachelor of Technology, Information Technology.

August 2014 - May 2018

GPA 3.42

WORK EXPERIENCE

Supply Chain Management Department, WP Carey School of Business

Oct - Dec 2019

Research Aide

Used spyder and BS4 to scrape US tariff data into a bucket in GCP. Performed schema designing and database creation using BigQuery (SQL interface) to create import export database. Created and ran API services in python for near duplicate removal using TF-IDF of ngrams, calculating cosine similarity and KNN classification of firm names. Generated reports using Power BI and MS-Excel.

Robotics and Intelligent Systems (RISE) Lab, ASU Polytechnic

Jul - Sept 2019

Research Aide

Established a network of sensors (2x Raspberry pi, 2x Intel Edison) to save readings from pressure sensors, and encoders in real time using multiprocessing python module. Developed a real-time visual interface for the sensor system using seaborn and matplotlib.pyplot, time synchronization of the embedded system for Reinforcement Learning, and Assisting with development of exo-skeleton and control system (IoT) for Gait Rehabilitation.

Bhabha Atomic Research Center, Mumbai

May - Jul 2017

Project Trainee

Used Tshark, a commandline tool provided with Wireshark through python script to capture the network traffic, performed API calls to GEO-IP database using RabbitMQ for managing requests for the location of origin of the DNS requests to BARC servers in real time. Developed python module for Risk detection using packet analysis and the coordinates retrieved from GeoIP database using Wireshark.

TECHNICAL SKILLS

Languages

Python (5+ yrs), SQL (4+ yrs), R (4+ yrs), C++ (2+ yrs), Java (2+ yrs), HTML/CSS (5+ yrs), JavaScript (3+ yrs)

Tools

Google Cloud, Docker, CUDA, BigQuery, Fast.ai, TensorFlow, PyTorch, Keras, Scikit Learn, NetworkX, OpenCV, BeautifulSoup, spyder, matplotlib.pyplot, seaborn, Wireshark, ROS, MATLAB, Gazebo, Tableau, Axure, Google Colab, Linux operating systems, D3, Power BI, shell.

Hard Skills

Reinforcement Learning, NLP, NLU, AI, Statistical Machine Learning, Transfer Learning, Big Data, Data Mining, Data Warehousing, Database Management, Embedded Systems, Data Visualization, Data Structures, Computer Vision, gloVe, Vader.

PROJECTS

• Sense Making in Graphs

Implemented Node2Vec algorithm, using TensorFlow for optimal feature representation of the Citation network. Developed algorithm for controlled random walk for sampling on the graph for training. Model uses Word2Vec skip gram architecture to rank papers based on similarity and perform Spectral Clustering in python.

• Expert Supervises CNN Classification

Implemented Fast-RCNN using TensorFlow establishing baseline for object detection and classification tasks on PASCAL dataset, and Logic Tensor networks with leaky ReLU as activation to achieve specific instances of real logic between objects in an image. Improved AUC from baseline 0.75 to 0.784

• Fine Tuned BERT for ARC challenge QA

Implemented next word masking, tokenization, and performed hyper-parameter tuning of BERT for a subset of ARC dataset for multi hop reasoning and question answering with 0.58 AUC using pytorch libraries. Developed a model to answer multiple choice questions based on a context, testing without context.

• Quadcopter balancing a ball using Proximal Policy Optimization

Implemented two policy feed forward networks as an ensemble system using TensorFlow and dealt with the continuous state space. Performed KL Divergence, Trust Region Policy Optimization on the actor network. Created environment and 3D designs of quadcopter on blender for using in V-Rep.