# Jiesen Zhang

jiesenzhang0723@gmail.com | www.linkedin.com/in/jiesenzhang | https://jiesen-zhang.github.io/web-portfolio
Authorized to work in the US without sponsorship

## EDUCATION

**University of Illinois at Urbana-Champaign** Aug 2019 – May 2022
*B.S. in Computer Science + Statistics, Minor in Business* GPA: 3.83/4.00
**Relevant Coursework:** Data Structures and Algorithms, System Programming, Methods of Applied Statistics, Probability and Statistics for Computer Science
**Achievements:** Fall 2019 and Spring 2020 Dean's List, The National Society of Collegiate Scholars

**University of Toronto** Sept 2018 – May 2019

## WORK EXPERIENCE

**Undergraduate Research Assistant** June 2021 – Current
University of Illinois

- Implemented a scalable Knowledge Graph using sentence segmentation, lemmatizing, information extraction and Python libraries Spacy, NLTK, Networkx and Matplotlib
- Compiled notes on research papers covering cross-media fake news detection, multilingual neural machine translation and document level argument extraction by conditional generates

**Course Assistant in CS 361: Probability & Statistics for Computer Science** Jan 2020 – May 2020
University of Illinois

- Provided training in fundamental analytical thinking utilizing various statistical and probability theorems and facilitated implementation of projects using Python and R
- Verified the content of written and coded assignments to assure students were learning material in a correct manner while balancing a rigorous course load

## PROJECTS

**Multi-label Image Classification and Object Detection** March 2021 – April 2021

- Designed a model architecture with multiple convolutional, max pooling, batch normalization and fully connected linear layers using PyTorch to achieve a mean average precision (mAP) of 64%
- Implemented You Only Look Once (YOLO) loss function from scratch and achieved 58% accuracy on PASCAL dataset for object detection

**Backpropagation in Multi-Layer Neural Networks** Feb 2021 – March 2021

- Gained a deep understanding of backpropagation by implementing it in 2-layer and 3-layer neural networks from scratch (without the help of any deep learning python libraries)
- Achieved an accuracy of 56% over 10 unique classes on all four neural networks on the CIFAR-10 dataset

**One-vs-Rest Multi-Class Classification** Jan 2021 – Feb 2021

- Trained and tested multiple linear classifiers using NumPy, namely: SVM, Perceptron, Softmax and Logistic Regression on CIFAR-10
- Achieved 40% accuracy over 10 unique classes on all four classifiers

**Multiple Linear Regression Analysis of S&P Predictor Variables** Sept 2020 – Oct 2020

- Predicted the effect of the Coronavirus Pandemic, economic indicators, and socioeconomic data on the price action of the S&P 500 through Multiple Linear Regression models
- Implemented statistical modeling and comparison methods such as ANOVA testing, variable interaction, polynomial regression and stepwise model selection to create a model with an adjusted R-squared of ~0.99
- Efficiently delegated work with team members to complete assignment by established timeline