Zhengqi (Drago) Dong

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EDUCATION

Ohio State University, Columbus, OH (Expected graduate on Spring 2021)   GPA: 3.5 / 4.0

B.S Computer Science Engineering (Minor in Statistics)

University of Dayton, Dayton, OH (August 2016 – August 2017)   GPA: 3.8 / 4.0

ENGINEERING EXPERIENCE

Plant Disease Diagnosis System, Honor Research Project (August 2019 – present)
- Working on the benchmark testing for various feature detector and classifier architecture on the open-source dataset.
- Award $5500 by College of Engineering towards "Research Distinction" or "Honors Research Distinction".

CSE4471 Information Security Final Project – Spam Filter Detector (July 2020)
- Data Processing: extracted the text body from MIME email format; split dataset to training, validation, and testing; removed stop words, and tokenize the word corpus for feeding to neural network.
- Conducted the study applying Recurrent Neural Network (RNN), Gated Recurrent Unit (GRU), Bidirectional Long short-term memory (LSTM), and Fine-tuning on Global Vector (GloVe) word vectors to the spam email detector on Apache SpamAssassin open-source dataset.
- Achieved 99.5% acc in training and 96% in validation, and further visualized the data in TensorBoard Embedding Projector.

CSE2421 Operation System Project: Air Traffic Control Simulator (Dec 2019)
- Created an Air Traffic Control Simulator in C including character-based graphical display with over 800 lines code spanning decades of files.
- Wrote generic linked list usable with any data type, and proven to handle memory allocation failures
- Used curses library for display control, nanosleep function to accelerate the simulation process.
- Used dynamic memory allocation and gracefully deals with allocation failures.
- Dealt with numerous unit conversion for heading speed, heading degree, screen size, flight position and etc.

CSE3901 Web Application Final Project: Freelance Canvas Web Application (July 2019)
- Used CSS(Bootstrap), HTML, and SASS to design the web interface
- Used Ruby on Rails for the whole application framework, includes features such as like, follow, and comment.
- Used ER-diagram and SQLite to desgin and store user data.
- Used Device modules for password registration, confirmation, recovery, authentication functions

OSU Data-IO 6-hr Competition — winner of Mid-Ohio Food Bank Challenge (October 2019)
- Reformatted/cleaned/processed/fitted data and produced the visualization result to the final report.
- Conducted time series analysis(identify the seasonality/stationarity/trends/autocorrelation) on the consumer flow volume dataset and given suggestions to improve logistic management.

RoboMaster Competition, AI Team Member, IEEE @ The Ohio State University (September 2018 – May 2019)
- Completed nearly 50% jobs for labeling the ground truth data over 500 pictures clipped form past video.
- Organized the Alpha testing for evaluating the performance and accuracy of aiming system.
- Practiced in operating the Standard Robot and Drone with remote controller in a simulated battlefield environment.

EcoCAR 3 Competition, Center for Automotive Research, The Ohio State University (August 2018 – December 2018)
- Implemented the Kalman Filter(KF) and EKF(Extended Kalman Filter) with MATLAB and Python(pykalman) to eliminate the noise and improve the accuracy for cars' position measurement.
- Analyzed old EcoCar3 Architecture and Version Control system, and presented the benefits in using GitHub for new season.

IEEE SAC'18 Competition Micromouse Robot at Pittsburgh (January 2018 – April 2018)
- Programed the DFS/BFS/Uniform cost/A* search algorithm with Python for Micromouse robot to search shortest path in a maze.

EXTRACURRICULARS

Related Coursework
- CSE1223(Java), ECE2020/2060(Analog & Digital Logic), CSE2321/2331(Algo & Ds), CSE2421/2431(OS), CSE3901(Web Dev), CSE3241(Database), CSE4251(Unix), CSE4256(Python), CSE3521/5522(AI), CSE3461(Networking), CSE4471(Info Security), CSE5523(Machine Learning), CSE5526(Neural Network), CSE5914.01(High-performance DL), CSE5525(NLP)
- Stat4201/4202(Probability & Statistic), Stat4194(R), Stat3301/3302(Statistical Modeling), Stat4620(Statistical Learning)

Techniques and skills
- Computing language: Python(keras, TensorFlow--with Google Certification), R, C (familiar with GDB and makefile), Java, Ruby, Ruby on Rails, SQLite, X86 Assembly Language(Little Endian), HTML, CSS, JavaScript, Latex, MATLAB
- Technology: PyCharm, RStudio, Eclipse, Linux, Git, SolidWorks, Arduino, Jetson TX2 and Nano, AWS (Cloud 9)
- Languages: English, Chinese (Native)

EXTRACURRICULARS

WebMaster at IEEE at OSU Undergraduate chapter, OH (January 2018 – Present)
- Designed and maintained IEEE's website with Drupal (https://ieee.osu.edu/), and updated organization events.

Vice-president at OSU Table Tennis Club, Columbus, OH (May 2019 – May 2020)
- Conducted weekly training session, provides technique clinic to improve member's serving, looping and striking ability.
- Cooperate with other club officers to manage the seasonal tournaments through the year (such as budge, travel planning)
- Cooperated with Nike's "Project Move" program to deliver table tennis culture and to promote people to move.

Volunteer at Mid-Ohio Workers Association, Columbus, OH (Oct 2017– Jan 2018)
- Gift-wrapping during Thanksgiving, set up family events for Christmas dinner, delivered donated food to low-income families, helped to edit photos, and canvased hundreds of neighbors.

HONOR AND ACTIVITIES

- Achieved Dean's List (>3.5 GPA) for five semesters, activated Honor student in OSU and involved in Honor Collegian Program.
- Award 2020 IEEE Excellent Service Award, active IEEE members (Student Member, 2018–Present).
- Personal interest: Table Tennis, Martial Art (Green Belt), Climbing, Track and Field, Scuba Diving (Certified Open Water Diver), Photography, Cooking, Camping, and Traveling.