Zhengqi (Drago) Dong

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EDUCATION

Boston University, College of Engineering, Boston, MA (GPA: 3.9/4.0)   **Expected 12/22**
MS in Robotics & Autonomous Systems
The Ohio State University, College of Engineering, Columbus, OH (GPA: 3.67/4.0)   **05/21**
B.S Computer Science Engineering (Minor in Statistics)
Graduated with Honor in Engineering, and Honor Research Distinction in Agricultural Engineering

Related Coursework: Medical Robotic, Soft Robotic, Motion Planning, Machine Learning, High-performance Deep Learning, Natural Language Processing, Computer Vision, Algorithm & Data structure, Interpreter & Compiler, Operation System, Networking, Information Security, Web Development, Database Systems, Probability & Statistic, Analog & Digital Circuits

WORK EXPERIENCE

Software Engineer Intern, YRobot, Boston, MA, United States   06/22 - 09/22
- Designed and developed a File Transferring Simulator for company's embedded system of wearable devices.
- Write C++ code in server and Python in client endpoint that can communicate based on TCP and X/Y/ZMODEM protocol.

Course Assistant, Boston University, Boston, MA, United States   01/22 - 05/22
- Course assistant for CS519 (Software Engineering X-Lab Practicum), supervised by Prof. Langdon White.
- Hold weekly office hours, oversaw lab sections, and answered students' questions regarding homework and labs.

Student Instructional Assistant, The Ohio State University, Columbus, OH, United States   08/20 - 05/21
- Teaching assistant for CSE 3461 (Computer Networking and Internet Technologies), supervised by Prof. Jim Vickroy.

PROJECTS AND RESEARCH

Deep-Learning Based Plant Disease Detection (Python, TensorFlow, Slurm/PBS scheduler):   06/19 - 12/20
- Awarded $5500 scholarship by proposing an image-based deep learning approach and application framework design.
- Compared pros and cons of approaches between machine learning and deep learning-based detection.
- Conducted sequences of hyper-parameter tunning to improve the result, including train-validation split ratio, batch size, and complexity of pre-trained models, and resulted in 99.5% and 98.11% accuracy in training and validation respectively.
- Completed "Honors Research Distinction" thesis over 70+ pages and presented the result at two research forums.

Filmpedia -- Movie Recommendation Website (Python, Django, React.js, Docker, Heroku, Travis CI):   08/20 - 12/20
- Coordinated with three other senior students to develop a dynamic movie recommendation website by using Django as backend and React.js as frontend.
- Accomplished various useful features by leveraging IBM Cloud Platform and TMDB RESTful APIs, including user and movie database, routes configuration, multi-languages support, movie searching and recommendation.
- Achieved automated deployment by containerizing the application with Docker and launched the app via Heroku.

Multi-threaded MapReduce Emulator (Multithreaded programming, C, makefile, Valgrind):   01/21 - 05/21
- Created and implemented a multi-threaded version of MapReduce Emulator for counting the number of occurrences of words for a given file, which potentially can be used for search engines or web crawlers in text processing.

"CORE" Language Interpreter (python, kernel of interpreter):   01/21 - 05/21
- Implemented a self-defined "CORE" language interpreter from scratch, with features including program tokenizer, recursive function call, semantic checking (syntax, type, scope, object binding), program executor, garbage collector, etc.

SKILLS

Programming languages: Python (Django, Flask, PyTorch, and certified Google TensorFlow Developer), and C/C++ (GDB, Valgrind, Makefile, gprof), Ruby (Ruby on Rails), Java, R (tidyverse and shiny), X86 Assembly Language, HTML, CSS(Bootstrap), JavaScript (React.js, Gatsby, Prisma), MATLAB, SQLite, Bash Script, LaTeX
High-Performance Computing Techniques: Code Optimization (e.g., loop parallelism, reassociation, blocking), Multiprocessor Optimization (e.g., Pthread, OpenMP, SSE/AVX intrinsic SIMD vectorization), GPU Optimization (e.g., CUDA programming), Distributed System (e.g., Slurm/PBS scheduler, MPI), Deep Learning Optimization (e.g, model/data/hybrid parallelism, LBANN, Horovod, Dask)
Software Techniques: Linux, GitHub, AWS (Cloud 9, EC2), Docker, Heroku, Postman, CAD (SolidWorks)

LEADERSHIP & EXPERIENCE

WebMaster, IEEE at OSU Undergraduate chapter, Columbus, OH   01/18 - 05/21
Vice-president, OSU Table Tennis Club, Columbus, OH   05/19 - 05/20

HONORS AND AWARDS

- Dean's List (>3.5 GPA) over five semesters and graduated with Honor Research Distinction.
- Awarded 2020, 2021 IEEE Excellent Service Award, active IEEE members (Student Member, 2018–Present).
- Awarded Table Tennis Team Champion at 2018-19 NCTTA Midwest Tournament.