

Zhengqi(Drago) Dong

☎ 614-592-5333 | ✉ dong760@bu.edu | 🌐 drago1234.github.io/about_me/ | 💼 www.linkedin.com/in/zhengqi-dong/

EDUCATION

Boston University, College of Engineering, Boston, MA (GPA: 3.9/4.0) **Expected 12/2022**

MS in Robotics & Autonomous Systems

The Ohio State University, College of Engineering, Columbus, OH (GPA: 3.67/4.0) **05/2021**

B.S Computer Science Engineering (Minor in Statistics)

Graduated with Honor in Engineering, and Honor Research Distinction in Agricultural Engineering

Related Coursework: Robotic Autonomous System, 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

PROJECTS AND RESEARCH

Deep-Learning Based Plant Disease Detection (Python, TensorFlow, Supercomputing Center, Slurm/PBS scheduler):

- 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 tuning 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):

- 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):

- 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):

- 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)

Robotic Techniques: ROS, Orb-SLAM, visual odometry, object detection, Jetbot, Jetson nano, Arduino, 3D Printing

LEADERSHIP & EXPERIENCE

WebMaster, Student Association of Graduate Engineers (SAGE) at Boston University, Boston, MA 08/21 – Present

Course Assistant (DS 519, Software Engineering X-Lab Practicum), The Boston University, Boston, MA 01/21 - Present

Student Instructional Assistant (CSE3461, Networking), The Ohio State University, Columbus, OH 08/20 - 05/21

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, three gold medals in Ohio International Chinese Martial Art Championship.