Eric Zhang

Self-motivated, focused, great attention to detail,
and a strong desire to learn and solve problems.

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Education

University of California Irvine summa cum laude, 2022
Bachelor of Science, Computer Science specialization in Intelligent Systems
Bachelor of Science, Mathematics

Skills

General

Data structures and algorithms, database management, DevOps, CI/CD, software testing, computer simulation, cryptography, object-oriented design, requirements and UML planning, agile workflow

Tools

Python (Tensorflow/keras, OpenCV), Java, Go, Rust, C/C++, JavaScript (NodeJS, React), SQL (PostgreSQL, MySQL), Linux, R, MATLAB, Mathematica, LaTeX, git/github, Docker

Artificial Intelligence & Machine Learning

Regression, neural networks, convolutional neural networks, ensemble methods, computer vision, image processing, medical imaging, advanced linear algebra, graph learning algorithms, statistical analysis, mixture models, reinforcement learning, GANs

Work Experience

Lawrence Livermore National Laboratory - DevOps Lead, Software Developer
September 2022 – Present

- Built from the ground up a framework for testing, compliance, and packaging – achieved reduction in production errors, increased modularity, and simplified workflow
- Reduced deployment time by 70% with automation
- Spearhead a novel machine learning project: authored proposal, outlined project roadmap/milestones, and currently lead project development

UC San Diego Center for Research in Biological Systems - Researcher
August 2021 – September 2022

- Created artificial intelligence models (design, training, validation) for segmentation and classification of chlamydia in microscopy images – validation accuracy up to 97%
- Improved prediction accuracy of previously trained models
- Built script to run full prediction pipeline – Reduced 30+ workflow commands into single command, providing multiple customization options. Complete setup/teardown in Docker.
- Demonstrated strong teamwork skills in multidisciplinary setting as well as independent problem-solving and technical research

Shanghai Jiao Tong University - Research Intern
July 2019 - August 2019

- Developed robotics software for autonomous drone landing on moving platform
- Performed image processing and analysis to detect objects
- Transmitted movement commands to a drone using the robot operating system (ROS) with a publisher-subscriber interface

Projects and Awards

Artist's Real-time Toolkit, HackUCI - Best Education Hack Award 2020

- Implemented back-end server and laser-pointer functionality for mobile phones without using heavy API calls or external dependencies – found by users to be the most engaging feature

Reunited Game, Berklee Game/Music Jam - Best Gameplay Award 2020

- Incorporated enemy movement behaviors as well as line-of-sight detection
- Built strong team synergy during discussions about level design and overall goals

Coalition Chess 2022

- Online 4-player chess variant packaged neatly into a single page application
- NodeJS back-end server capable of handling many concurrent games and spectators, serving a navigable React front-end made using UI/UX principles.

For more, see
origamimantis.github.io