Chun Yang

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SUMMARY

Skilled in deep learning, NLP, image processing, and predictive modeling with proficiency in deriving insights from big data and creating data-driven models. Looking to apply my expertise in developing impactful machine-learning solutions.

SKILLS

Full Stack: HTML, CSS, Java, JavaScript, Bootstrap, Angular, SwiftUI, Node.js, EJS, jQuery, Flask, SQL, Git

Machine Learning: Python, Deep Learning, NLP, Sklearn, Pandas, PyTorch, TensorFlow, Keras, HuggingFace

Game Programming: C++, Unreal Engine

EXPERIENCE

Senior Software Engineer | Universal Global Scientific Industrial Co., Ltd | Taipei, TW | November 2018 - May 2022
· Conducted real-time analysis of raw data from 200+ machines, spanning 6 national sites and 50 production lines.
· Engineered AI solutions for image classification in optical inspection, achieving an 80% reduction in false alarm instances.
· Collaborated with international teams in Portland, Mexico, and China to develop over 20 software modules for various machines.

EDUCATION

Master of Science in Computer Science | University of Southern California | Los Angeles, CA | 2024 | 3.92 / 4.0

Master of Science in Computer Science | National Chiao Tung University | Hsinchu, TW | 2018 | 4.03 / 4.3

PROJECTS

Martian Terrain Image Classification: Enhancing Planetary Diagnostic Tools with CNN and Transfer Learning | https://github.com/cy3021561/ds-MartianFrostDetection-CNN-TransferLearning
· Spearheaded a CNN-based classifier project for identifying frost in Martian images, involving image augmentation and data preprocessing of over 119,920 tiles.
· Employed transfer learning with models such as EfficientNetB0 and ResNet50, achieving a notable 87.9% F1 score. Conducted a comprehensive comparative analysis of model performances.
· Executed extensive data analysis and model evaluation, resulting in the effective identification of key features in Martian terrain images, contributing to the project's goal of enhancing diagnostic tools in planetary science.

Sentiment Analysis in Mental Health: Detecting Hidden Signs of Anxiety and Depression with NLP | https://github.com/nnsadegh/NLP-MentalHealth-Insight
· Drove the advancement of the NLP-MentalHealth-Insight project, leveraging advanced NLP methods to uncover concealed indicators of anxiety and depression within the text, building upon the research foundation set by Wolohan et al. (2018).
· Engineered and benchmarked a suite of machine learning algorithms, such as Perceptron, SVM, and BERT, to analyze sentiment and classify emotions in mental health-related text from online sources, including Reddit.
· Aimed at improving tools for mental health diagnosis and monitoring, the project shed light on linguistic cues linked to mental health issues, overcoming barriers in environments where stigma suppresses open dialogue.

Autonomous Mini Self-Driving Car: Deep Q-Learning and Reinforcement Learning Techniques | https://github.com/cy3021561/mini-self-driving-car
· Developed a mini self-driving car AI using Deep Q-Learning, demonstrating expertise in reinforcement learning by training the AI to autonomously navigate a simulated environment.
· Applied experience replay techniques for efficient learning and stability, enhancing the AI agent's decision-making capabilities in varied scenarios.
· Designed a complex driving environment and experimented with various action selection policies, such as ϵ-greedy and softmax, to optimize the AI agent's exploration and exploitation balance.

INVOLVEMENT

AI Team Leader | Collaborative Vision Laboratory, NCTU | September 2016 - June 2018
· Created a drone-based aerial video surveillance system designed for campus delivery operations.
· Guided the vision team in our lab to analyze images from simulated environments, facilitating the development of autonomous piloting responses.