Clark Peng

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Education

University of California, Los Angeles — Los Angeles, CA
B.S in Computer Science — *Aug. 2024 – June 2028*

Experience

Technical Advisor Intern — November 2024 – Present
Scale AI — *Remote*
- Utilized prompt engineering to guide state-of-the-art LLMs in solving complex, expert-level coding challenges.
- Applied and created detailed chain-of-thought processes to train LLMs for generating more accurate and efficient coding solutions.

Undergraduate Researcher — October 2024 – Present
UCLA NLP Group — *Los Angeles, CA*
- Fine-tuned LLMs for video-language understanding tasks, enabling more robust multi-modal comprehension.
- Enhanced video-language generation evaluation methods using synthetic datasets, improving models' physical commonsense reasoning capabilities.

Teaching Assistant — May 2024 – August 2024
MIT — *Cambridge, MA*
- Optimized machine interface workflows by integrating RL algorithms into existing codebases.
- Improved the quality and complexity of synthetic image generation through advanced techniques.
- Instructed over 30 students on foundational deep learning concepts using PyTorch, focusing on CV and RL.
- Delivered lectures on training physics-based agents with RL frameworks via Unity.

Student Researcher — June 2023 – May 2024
University of Reno, Nevada — *Reno, NV*
- Enhanced fire and smoke detection pipelines by integrating state-of-the-art object detection tools for weakly supervised inputs.
- Automated data labeling and transformation processes using Python, expanding the dataset by 25%.
- Conducted hyperparameter tuning experiments to improve DETR object detection model performance.

Papers

1. Peng u. Dinçer 2024 Peng, Clark ; Dinçer, Tolga: *Event Detection via Probability Density Function Regression*. https://arxiv.org/abs/2408.12792. Version: 2024

Projects

Kaggle Competitor | *Python, Pandas, NumPy, Pytorch, Tensorflow, Matplotlib* — January 2022 – Present
- Collaborated with professional machine learning engineers and student teams to design and implement end-to-end ML pipelines for complex tasks.
- Published multiple high-scoring codebases in various machine learning competitions.
- Achieved top 0.5% in competitions, top 1% in notebooks, and authored five gold medal-winning scripts.

RL Hand & Target project | *Unity, C#* — April 2024 – August 2024
- Built a physics-based simulation environment in Unity, enabling an AI agent to manipulate objects with a simulated arm and articulated finger joints.
- Designed and integrated a custom RL interface in Unity to incentivize specific agent actions through a reward-based system.

Technical Skills

Languages: Java, Python, C/C++, C#, SQL
Engines: Unity
Developer Tools: Git, Docker, VS Code, Visual Studio, Eclipse
Libraries: Pandas, NumPy, Pytorch, Tensorflow, Matplotlib, Regex, Polars, Transformers