Stanford

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Bio

BIO

I am an undergraduate student at Stanford University studying Computer Science and Electrical Engineering with an emphasis on artificial intelligence. I am constantly seeking to learn and develop new machine-learning techniques and build applications based on them, especially in the areas of health, environment, and human-computer interaction. I'm especially interested in brain-inspired computing for energy-efficient systems.

As a software engineering intern at AMD AI Group since June 2024, I've gained expertise in machine learning compilers and optimized model performance across diverse hardware architectures. I unified AI/ML model implementations for high-performance computing on CPUs, GPUs, and AI accelerators. I also developed masked and causal attention modules on Torch-MLIR and IREE, enabling models like LLaMa and Stable Diffusion on the AMD stack.

My other recent projects include the development of 1) a wildfire prediction method by analyzing trends in environmental, meteorological, and geological data with an aim to mitigate the impact of California's devastating wildfire seasons, 2) a respiratory disease exacerbation prediction system based on a novel spatio-temporal artificial intelligence algorithm and local environmental sensor network, 3) a machine learning technique for automating patient facial condition assessment and surgery planning, 4) blood alcohol level estimation using infrared imaging and deep neural networks, and 5) a novel image recognition framework utilizing a quantum optical convolutional neural network.

I have published papers based on my research in peer-reviewed journals, including the Journal of Environmental Management, IEEE Access, Electronics, and Facial Plastic Surgery & Aesthetic Medicine. I have won top national awards in the USA Physics, Astronomy & Astrophysics, Junior Math, Computing, and Biology Olympiads and was named Regeneron STS Top 300 Finalist in 2023.

Outside of academics, I play clarinet, tennis, and volunteer with organizations to help sensory-deficient individuals, including the Baker Institute for Children with Hearing Loss, Starkey Hearing Foundation, and VocaliD.