CHOU (ATHENA) MO

(310) 691-9425 | athenamo@g.ucla.edu

EDUCATION

University of California, Los Angeles — **Los Angeles, USA**

Bachelor of Science in Mathematics of Computation — *Expected Jun 2027*

- Relevant Coursework: Multivariable Calculus, Differential Equations, Linear Algebra, Optimization, Applied Numerical Methods, and Introduction to Computer Graphics.

PUBLICATIONS

** denotes equal contribution*

Conference

Enhanced Landmark Detection Model in Pelvic Fluoroscopy using 2D/3D Registration Loss
Chou Mo*, Yehyun Suh*, J. Ryan Martin, Daniel Moyer
[Oral Presentation] SPIE Medical Imaging, 2026, Vancouver, Canada

Landmark Detection Uncertainty as a Reliability Weight for Robust Landmark-based 2D/3D Pelvic Pose Estimation
Yehyun Suh, Brayden Schott, **Chou Mo**, John Ryan Martin, Daniel Moyer
Medical Imaging with Deep Learning (MIDL), 2026, Taipei, Taiwan

RESEARCH EXPERIENCE

UCLA Medical & Imaging Informatics — **Los Angeles, USA**

Undergraduate Researcher — *Oct 2025 – Present*

- Worked in Hsu lab under the guidance of Dr. William Hsu. Conducting research in intra-patient registration on lung CT with optimal transport methods, focusing on optimizing the existing 3D point cloud pipeline to adopt end-to-end CT temporal registration.

Vanderbilt University School of Engineering — **Nashville, USA**

Summer Researcher (VISE Summer Fellow) — *May 2025 – Aug 2025*

- Worked in the VINE lab under the guidance of Dr. Daniel Moyer. Conducting research in computer vision for medical imaging, focused on improving orthopedic surgical planning through automated pelvic pose estimation.
- Built a pipeline using DiffDRR, OpenCV, and a custom differentiable Pose Estimation Loss algorithm to register 2D/3D landmarks for U-Net. The paper has been accepted for oral presentation at SPIE Medical Imaging 2026.

UCLA Elegant Mind Club — **Los Angeles, USA**

Data Science Lab Member & Coordinator — *Sep 2024 – Aug 2025*

- Worked under the guidance of Dr. Katsushi Arisaka. Investigated the differences in sensory processing speed across tactile, auditory, and visual stimuli.
- Implemented reaction time experiments using Arduino-controlled devices, including LEDs and sound stimuli for precise timing and measurement. Focused on analyzing sensory pathways to explore conscious awareness and unconscious reflex mechanisms.

PROJECT & WORK EXPERIENCE

Continuous Human Pose Data Recognition with CNN and Transformer — *Jan 2024 – Jan 2025*

- Built a hybrid CNN-Transformer model to classify human poses from continuous frame sequences, achieving 87% overall accuracy on a labeled dataset of 20 distinct poses.
- Processed delta changes in key skeletal joint positions extracted from 8,000+ frames of motion data to capture dynamic transitions between poses.
- Optimized the model for real-time inference with a latency of ~120ms per frame, suitable for near-live applications. Improved pose recognition performance by 9% through a custom preprocessing pipeline.

VisionX — **San Jose, USA**

Software Engineer & Data Analyst Part-Time — *Sep 2024 – Dec 2024*

- Promoted to work on a client project building an RAG and LLM pipeline with Qwen, JSON, and SQL.

Software Engineer Intern — *Jun 2024 – Sep 2024*

- Worked as a full-stack engineer with a focus on AI, backend, and database. Independently initiated a project on the company's Web 3.0 forum website with Node.js, GPT API, and MongoDB. Deployed and optimized the forum with AWS SDK and a recommendation system for user data.

SKILLS & ENVOLVEMENT

Leadership and Extracurricular: UCLA University Rovers Challenge (Programming Lead), UCLA Data Science Union (Project Co-lead), UCLA Club Sports Sailing (Skipper & Crew)
Programming Languages: *Proficient* - Python; *Intermediate* - C++; *Introductory* - C, Java, JavaScript, and R.
Technical skills: Pandas, Numpy, TensorFlow, PyTorch, Node.js, OpenCV, SQL, Git, ROS, MATLAB, ITK-Snap, Slicer.