Milos Vukadinovic

🌐 milosvuk.com | 🎓 Google Scholar | 💻 Github | 🔗 Linkedin | 🐦 Twitter

EDUCATION

PhD in Bioengineering | **AI in Cardiac Imaging**   September 2022 - September 2026
University of California, Los Angeles

- Advisors: David Ouyang (primary advisor), Debiao Li (thesis advisor)

Bachelor's | **Double Major in Mathematics and Computer Science**   August 2018 – May 2022
American University in Bulgaria, semester abroad at Carroll College   Blagoevgrad, Bulgaria ; Montana, USA

- **Teaching Assistant**: C++, Calculus I, Fundamental Data Structures, Finite Mathematics

SELECTED PUBLICATIONS

- **EchoPrime**: A Multi-Video View-Informed Vision-Language Model for Comprehensive Echocardiography Interpretation (**Vukadinovic et al.**) *In review* [📄Paper] [🖥Code] [🚀Demo]

- Vision language foundation model for echocardiogram interpretation (Matthew Christensen, **Milos Vukadinovic** et al.) **Nature Medicine** [📄Paper] [🖥Code] [🚀Demo]

- Deep learning-enabled analysis of medical images identifies cardiac sphericity as an early marker of cardiomyopathy and related outcomes (**Vukadinovic et al.**) **Cover of Cell Med** [📄Paper] [🖥Code]

- **GANcMRI**: Cardiac magnetic resonance video generation and physiologic guidance using latent space prompting '(**Vukadinovic et al.**) presented @ **NeurIPS** published @ **PMLR** [📄Paper] [🖥Code] [🚀Demo]

HONORS & AWARDS

Best oral presentation at UCLA Research Day   December 2024
University of California, Los Angeles   Los Angeles, USA

Winner of Medical Image De-Identification Challenge   October 2024
National Institute of Health (NIH)   USA

"Best Student of the Generation" Award, Mathematics Major   May 2022
American University In Bulgaria   Blagoevgrad, Bulgaria

Programming Competition Medalist   2019 - 2022
CompMath - Bronze MUC - Silver ICPC - Honorable Mention AUBG - 1st place

EXPERIENCE

Kaiser Permanente   January 2025 -
Data Scientist   Pleasanton, CA

- Leading the development of diagnostics models for cardiac features prediction from echocadiography

Cedars-Sinai, Biomedical Research Institute   May 2021 -
Visiting Graduate Student and previously Research Intern   Los Angeles, CA

- Researching AI applications in healthcare using cardiology data: echocardiograms, MRI, ECGs, and related modalities.

Ablera   May 2020 – December 2020
Software Developer *in Computer Vision Team*   Sofia, Bulgaria

- Fine-tuned and deployed machine learning models (DeepLab, CycleGAN) using PyTorch, Docker and Ms Azure
- Created a microservice for generating PDF files for policies, using .NET

SKILLS

Programming : Python, PyTorch, Docker, TensorFlow, Keras, C++, R, Julia, SQL, MATLAB, Bash, Flask
Machine Learning Transformers, CNNs, Contrastive Learning, GANs, Diffusion Models, ML on videos, large-scale training
Languages : Serbian (native), English (fluent)

NOTABLE ENGAGEMENTS

President of the college Mathematics Club - Polygon   2019/2020 and 2021/2022
- ∗ Responsible for planning and organizing Math competitions, talks, and workshops
- ∗ Scaled the club from 7 to 28 members

Mentor in Harvard's OpenBio SRI Program   June 2024 - September 2024
- ∗ Mentored a high school student aspiring to become a researcher; she authored a paper by the end of the program and documented her experience in a blog post.

Personal Projects and Hackathons   2022 - 2025
- ∗ I participated in Global Game Jam (2018), HackAUBG (2022) and selective participation ScaleAI's Generative AI hackathon (2023). My team won third place with UpSave android app.
- ∗ Some personal projects that I am of proud of are: Zeno - a CLI tool for compressing text files using Huffman and Arithmetic coding, Slot Attention Reproduction - selected for a presentation at EEML, Datasets that lead FCN to behave as CNNs (see all on my github)

REVIEWING

- ∗ **Reviewer at Pacific Symposium on Biocomputing 2024**2024
- ∗ **Reviewer at Machine Learning For Health Symposium @ NeurIPS 2024**
- ∗ **Reviewer at MICCAI 2025**
- ∗ **Chair at ML4H 2023 research roundtables on Health AI and patient privacy**