Kevin Zhang

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Education

Paul G. Allen School of Computer Science & Engineering (CSE), University of Washington   *Seattle, WA*

B.S. in Computer Science, GPA: 3.97   *Grad. Jun. 2026*

- Coursework: Deep Learning, Natural Language Processing, Machine Learning, Explainable AI (Grad)

Work Experience

Microsoft   *Redmond, WA*

ML-Focused Software Engineering Intern   *Jun. 2024 - Sep. 2024*

- Built end-to-end Copilot feature in Dynamics 365 Commerce for Store Associate Q&A
- Integrated Microsoft Copilot Studio into Dynamics 365 Commerce with service-to-service authentication
- Created an API performance monitoring feature using agents

Shapiro Lab for Deep Learning and Computer Vision   *Paul G. Allen School of CSE*

Undergraduate Researcher   *Jul. 2022 - Present*

- Created novel medical image-text dataset from medical pedagogical videos with 4.7M samples spanning 12 medical domains
- Developed data pipeline to align narrator cursor movements with speech for dense visual grounding
- Created benchmark to evaluate LLM performance on fundamental visual tasks in medical imaging

University of Washington Division of Cardiothoracic Surgery   *UW Medical Center*

Undergraduate Researcher mentored by Dr. Jay Pal   *Oct. 2023 - Present*

- Conducted study on digital stethoscope screening for heart disease in low-resource settings
- Created study protocol to evaluate AI detection of heart murmur for rheumatic heart disease detection
- Part of international team organizing heart disease screening camps in Nepal

Physicians of Southwest Washington (PSW)   *Olympia, WA*

Data Modeling Intern   *Aug. 2023 - Sep. 2023*

- Created data model to implement state-of-the-art FHIR healthcare exchange standard for company data
- Worked with SQL, RESTful API, and relational database of population health data to streamline healthcare interoperability

University of Washington Division of Cardiology   *UW Medical Center*

ML Research Intern mentored by Dr. Song Li   *Sep. 2021 - May. 2023*

- Used explainable machine learning to determine factors predicting right heart failure post-left ventricular assist device (LVAD) implantation
- Developed gradient boosting models to identify patients at risk for post-LVAD implantation procedure complications

University of Washington Dept. of Radiation Oncology   *UW Medical Center*

Undergraduate NLP Researcher   *Oct. 2023 - Present*

- Conducted meta-analysis on research topic funding and trends in radiation oncology research fields

University of Washington Dept. of Physiology and Biophysics   *UW Medical Center*

Lab Intern mentored by Dr. Chris Liu   *Sep. 2021 - Jun. 2024*

- Conducted experiments to determine regulated cell death mechanisms for treating heart disease
- Performed cell experiments, protein and DNA blotting, gel electrophoresis, DNA genotyping

Asia Pacific Cultural Center (APCC)   *Tacoma, WA*

Program Coordinator   *Aug. 2023 - Present*

- Started the Asian American and Native Hawaiian/Pacific Islander Journey to Wellness community health program
- Planned, organized, and ran quarterly community health screening fairsy.

Publications

MedicalNarratives: Connecting Medical Vision and Language with Localized Narratives

Wisdom O. Ikezogwo*, **Kevin Zhang***, Mehmet Saygin Seyfioglu, Fatemeh Ghezloo, Ranjay Krishna, Linda Shapiro

Under review for NeurIPS 2025 D&B Track

MedBLINK: Probing the Fundamental Medical Imaging Knowledge of Multimodal Language Models

Mahtab Bigverdi*, Wisdom Ikezogwo*, **Kevin Zhang***, Hyewon Jeong, Mingyu Lu, Sungjae Cho, Linda Shapiro, Ranjay Krishna

Accepted to CVAMD 2025

Explainable Machine Learning Analysis of Right Heart Failure After Left Ventricular Assist Device Implantation

Arjun Bahl, Binish Qureshi, **Kevin Zhang**, Claudio Bravo, Claudius Mahr, Song Li

American Society for Artificial Internal Organs (ASAIO) Journal May 2023

Use of AI-Based Screening Tools Improves Detection of Heart Disease in Rural Communities of Nepal

Kevin Zhang, Mackenzie Adcox, Angela D. Pal, Rache Mureau-Haines, Taylor Kay-Young, Michael Mulligan, Jeanne M. DeCara, David Y. Zhang, Bhagawan Koirala, Jay D. Pal

Under review for Journal of Thoracic and Cardiovascular Surgery

Loss of GPX4 induces dilated cardiomyopathy by promoting mitochondrial iron overload and ferroptosis via Bach1-HO-1 signaling

Xiaoyun Guo, Yi Chen, Yachang Zeng, Xiaoliang Mo, Siqi Hong, Hui He, Jing Li, Haiyan Zhou, **Kevin Zhang**, Sulail Fatima, Qinghang Liu

Under review for Journal of Clinical Investigation

Presentations

Jun. 2025	**Western Thoracic Surgical Association 51st Annual Meeting**	*Dana Point, CA*
	Using AI and Digital Stethoscope Technology for RHD Detection in Low- and Middle- Income Countries	
May 2025	**33rd Annual Visiting Scholar in Cardiothoracic Surgery Case Presentation & Research Forum**	*Seattle, WA*
	Leveraging AI and Digital Stethoscope Technology for Low EF Detection in Resource-Limited Settings	
March 2025	**PNW Heart Failure Conference 2025**	*Seattle, WA*
	Leveraging AI and Digital Stethoscope Technology for Low EF Detection in Resource-Limited Settings	
Oct. 2024	**XXII International Congress on the Management of Cardiovascular Disease**	*Kathmandu, Nepal*
	Predicting Right Heart Failure Post-LVAD Implantation With Explainable ML	
Sep. 2022	**American College of Cardiology Washington Chapter Annual Event**	*Spokane, WA*
	Leveraging Modern Technology to Improve Rural Access to Cardiology Care	