Ultrasound imaging is widely utilized in clinical settings due to its cost-effectiveness, mobility, and safety. While current research in medical universal AI predominantly focuses on language models and general image segmentation, our study introduces a novel universal framework tailored specifically for ultrasound applications.

Our proposed framework offers versatility across various clinical tasks, seamlessly accommodating different ultrasound characteristics, anatomical positions, and input types. We've developed a unique module that integrates task-specific information into the model's learning process, making it adaptable to diverse clinical scenarios.

To validate our approach, we've meticulously curated a comprehensive ultrasound dataset from publicly available sources, encompassing annotations from seven distinct anatomical positions, totaling over 9.7K annotations. Our experimental results demonstrate the effectiveness of our model compared to single-dataset-trained models and networks lacking prompt guidance.

Moving forward, we remain committed to expanding our dataset and refining our prompting mechanism to enhance the universality of our approach in medical ultrasound imaging. Additionally, we will openly share our model weights, datasets, and code, fostering collaboration and transparency within the research community.