

Ultrasound 4 All (US4All)

An AI-guided ultrasound training solution

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The background image shows the interior of a large white tent, likely a temporary medical facility. Rows of metal-framed medical beds with green mattresses and white linens are arranged on both sides of a central aisle. In the far distance, two people are standing near an opening in the tent. The ceiling is made of white fabric with several medical monitors or lights hanging from it. The floor is a light-colored, possibly sandy or concrete surface.

Mission statement:

We aim to improve disease diagnosis in remote settings through user-friendly ultrasound imaging.

The problem

Access and cost barriers in rural settings

- Can be as much as \$156 and 245 min. of travel to tertiary care centers

Point-of-care ultrasound (POCUS) is a **low cost, portable** diagnostic device

- Point-of-care ultrasound (POCUS) is as inexpensive as \$2000

It **requires skill** to acquire and interpret the images

- 45.1% of physicians listed “a lack of training” as a primary barrier
- A review from 2019 reveals training programs vary from 2 to 320 hours.

Our solution

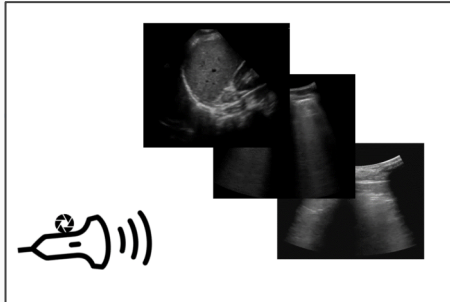
Stage 1: Hardware

Create a hardware plug-in that can interface with any POCUS probe to provide orientation information.



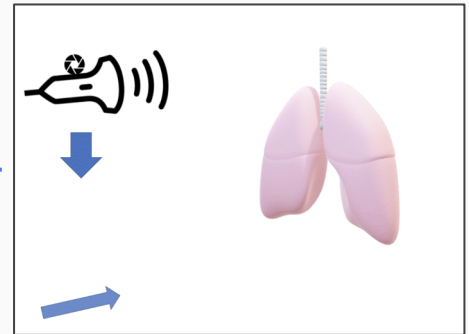
Stage 2: Software

Create software that can stitch 2D US images into 3D image volumes.



Stage 3: Software

Use the 3D image volumes to dynamically guide the user's image acquisition in real-time.



Our Solution



Meet the team

Our diverse skill set, combined with our shared passion to bring AI-driven diagnostics to underserved populations, makes us the right team for the job.



Alexander Alvarez

MD/PhD candidate in Biomedical Engineering, working in an ultrasound imaging lab



Katie Sosnowski

PhD student in Biomedical Engineering with research experience in machine learning and point-of-care devices



Kimberly Doty

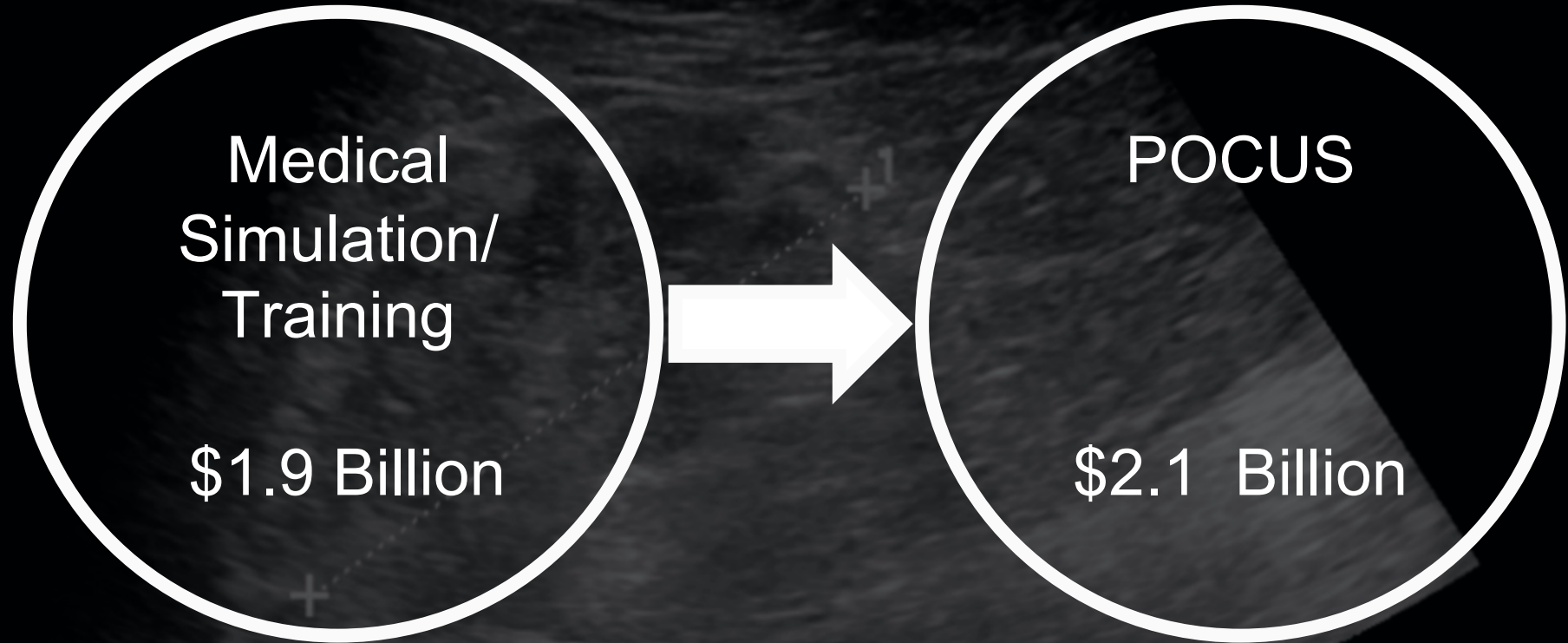
PhD candidate in Biomedical Engineering and Masters in Optical Science student working in an imaging research lab



Levi El Fattal

Data Science focusing in Bioinformatics, MS with experience working with biological data and machine learning

The Market



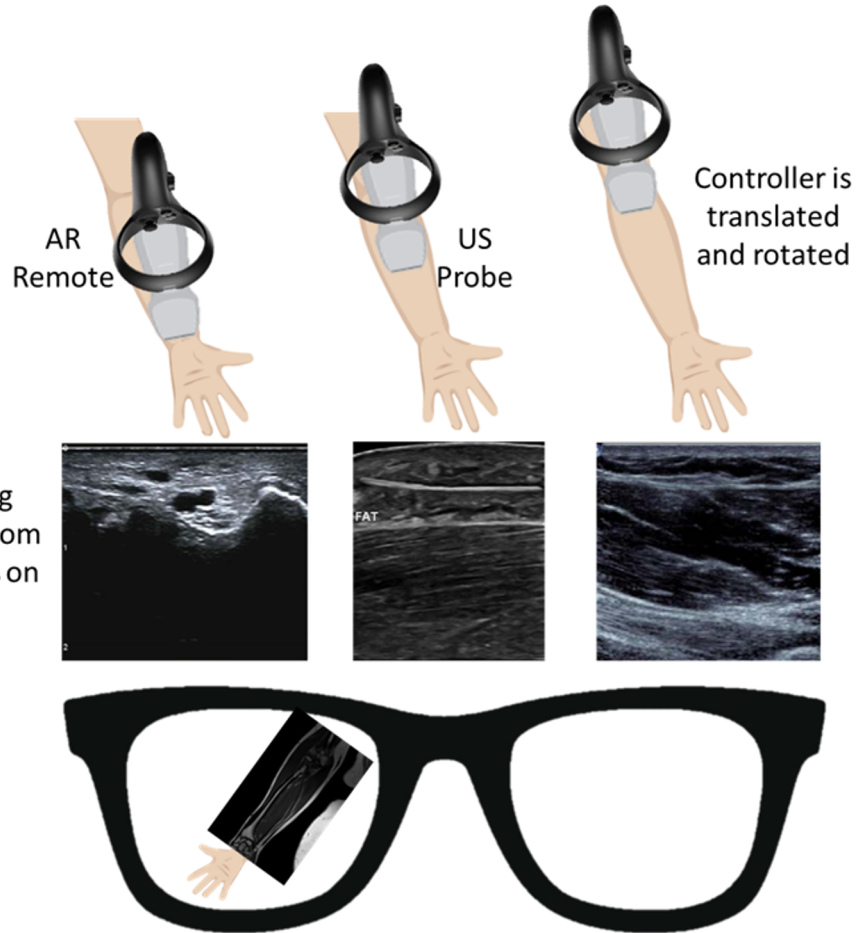
End-Users



- ❑ Rural America represents ~19% of the population
- ❑ 13.1 physicians per 10,000 population
- ❑ A feasibility study found that 86% would use POCUS in their practice after an initial training
- ❑ Potential End-Users:
 - ❑ **70,637 Physicians**
 - ❑ **62.7 Million Patients**

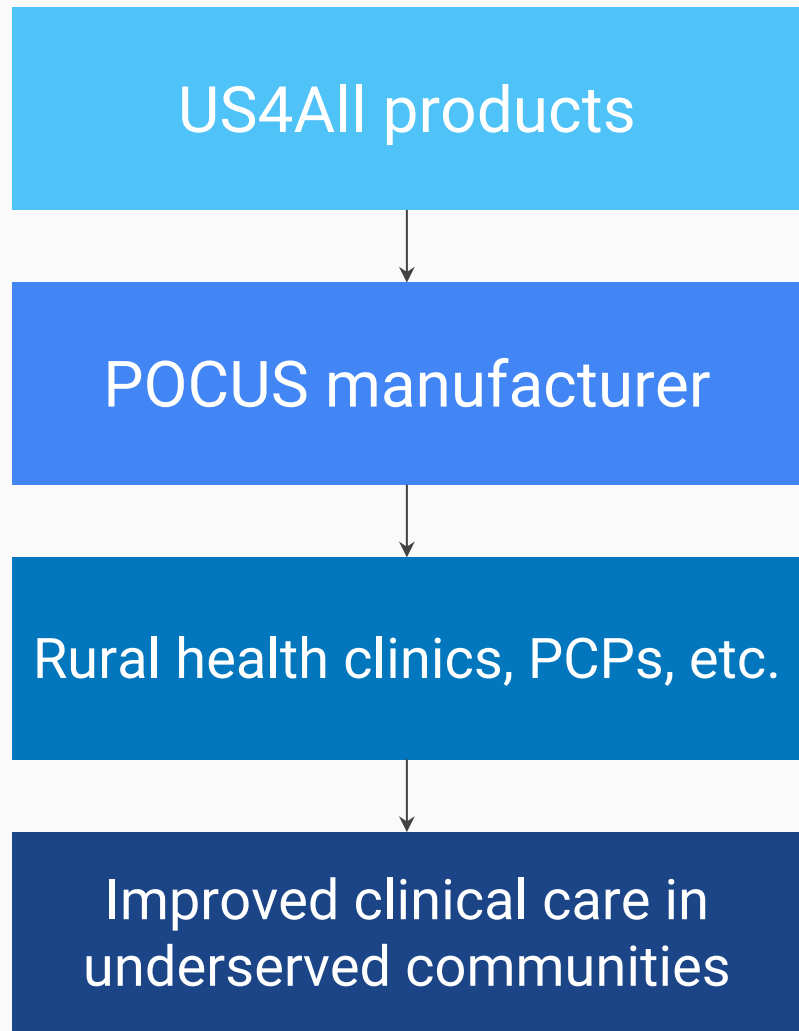


Competition

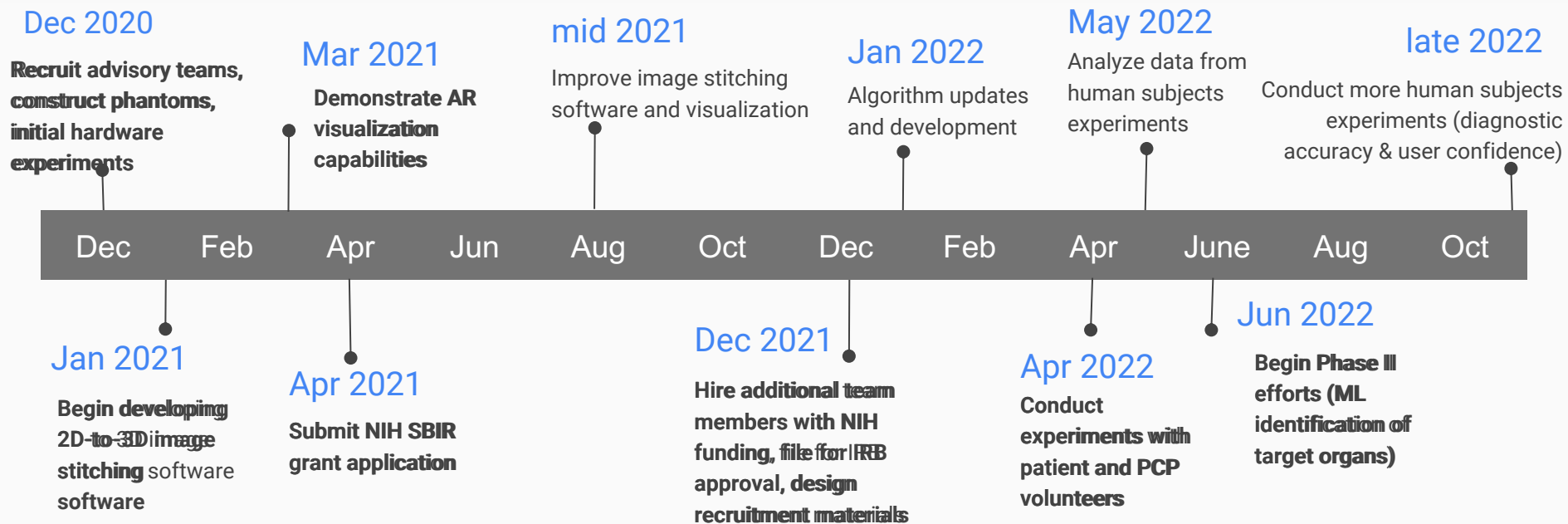


Business Model

Our exit strategy is to sell our products to a POCUS manufacturer.



Timeline



Questions?

Many thanks to:

- Jeff Hersh PhD, MD, Chief Medical Officer, GE Healthcare
- Emre Toker, Joe Grailer, and the E4B 2 program
- Nilgün Özkurt