



Reticle

Intelligent Medical Instrument

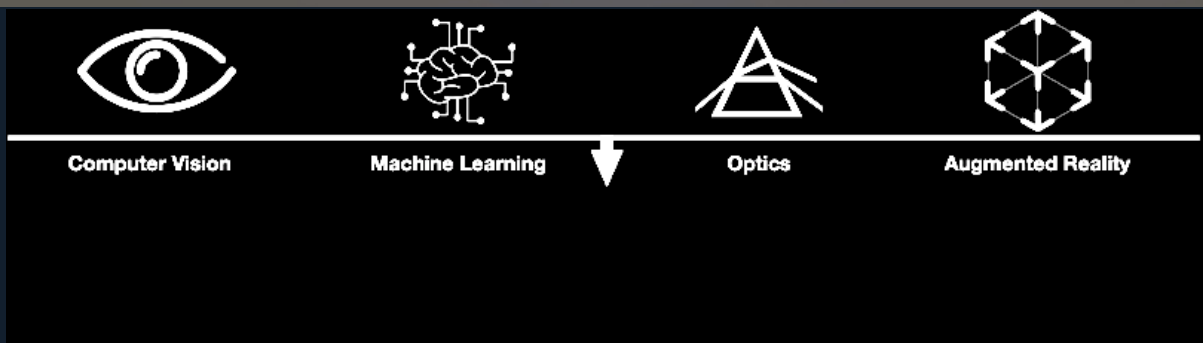
Reticle Retina

Intelligent Optometry Instrument

Patent Pending Technology

Reticle was developed by Seekar Technologies to utilize advances in mobile technology by providing capabilities of expensive and large optometry machines into a modern mobile device. Through our unique blend of computer vision, infrared imaging, augmented reality, and artificial intelligence, Reticle bridges the gap between time and diagnosis by bringing our proven capabilities into the medical industry. Reticle's technology has been proven to provide at up to at least 94% accuracy in detecting different anomalies in the human eye. Our goal with Reticle is to build a platform that can enable earlier detection and prevention of critical illnesses, such as blindness, by removing barriers to access.

At its heart, Reticle is an intelligent mobile medical instrument built from a unique algorithmic blend of computer vision, machine learning, optical manipulation, and augmented reality.



Detect Critical Health Conditions Earlier

Several scientists and medical professionals utilize large, immobile - and perhaps antiquated - machines in their day-to-day tasks to analyze patient and specimen data. Modern mobile devices have capabilities that can heavily compliment or entirely replace some of these instruments - capabilities such as infrared sensors, gyroscopes, accelerometers, computer vision, artificial intelligence, augmented reality, and audio analysis.

Similar to how a Tesla automobile gains more capability as its software is upgraded, or an Amazon Alexa smart home unit gains more capability as its “skills” are updated, Reticle is a developing health technology that gains more sophistication and capability over time as its machine learning models are trained and high-fidelity data is received from its use within strategic partnerships.

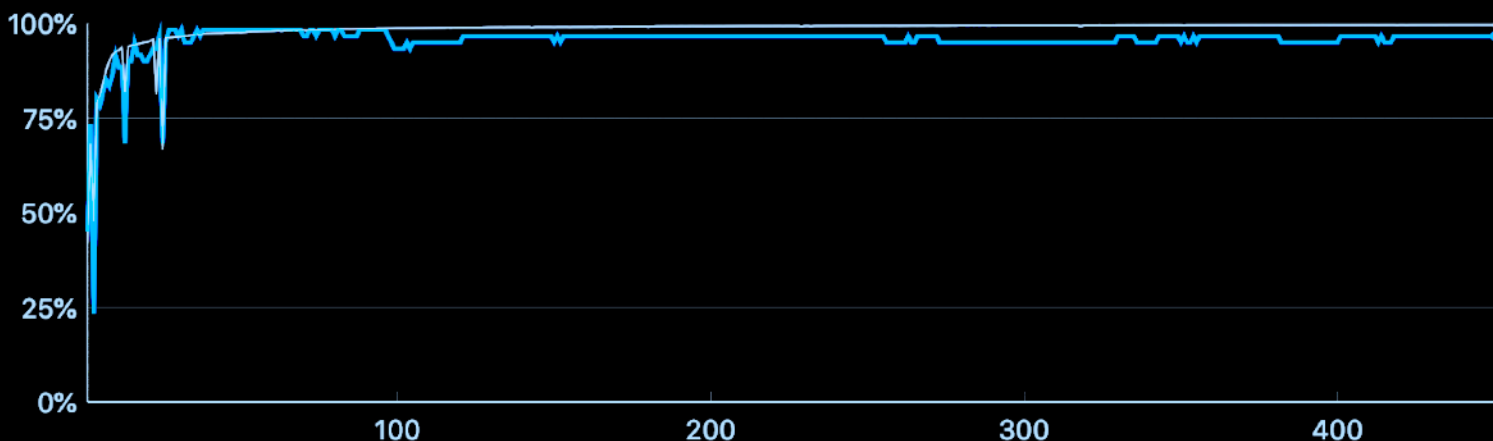


Upon FDA approval, Reticle's self-learning technology has incredible potential to detect critical optometry conditions early on.

Reticle Retina

The AI-based computer vision model, when coupled with Reticle's platform, obtained greater than 94% accuracy in correctly detecting drusen, diabetic macular edema, diabetic retinopathy, and cytomegalovirus. Out of 17 different studies, precision and recall only deviated 2.1%, with 94.23% being the highest achieved accuracy of the compiled results.

New efforts have proven successful in correctly classifying early signs of glaucoma, retinal detachment, and early symptoms of Alzheimer's disease.



Completed after iteration 450 of maximum 450

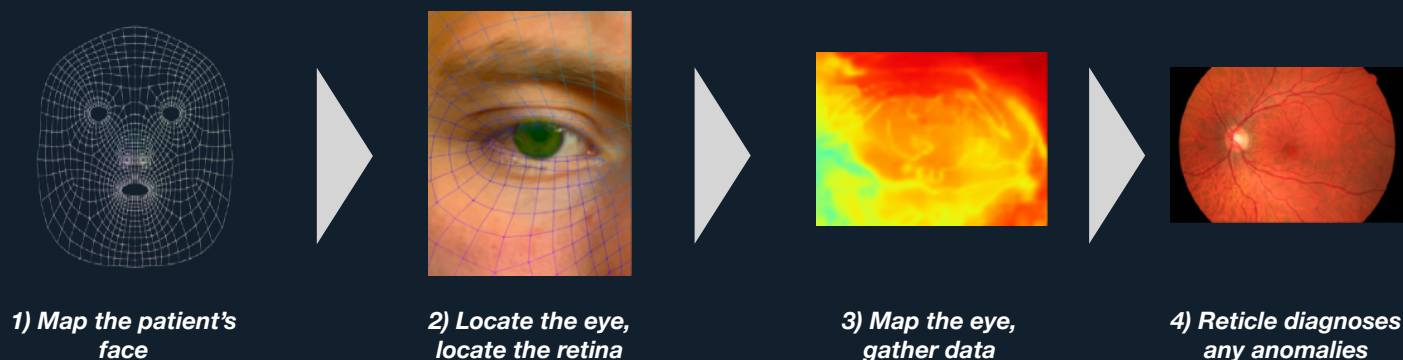
— Training accuracy 100%

— Validation accuracy 97%

A snapshot of Reticle being trained on a machine learning model for detecting diabetic retinopathy. Reticle's models are validated over terabytes of data throughout months of training. Seekar uses a custom-built proprietary artificial intelligence platform to train Reticle for up to days at a time.

Once a statistically validated intelligence model is trained, Reticle updates itself with this new knowledge and begins applying it immediately. Below is an example of how a user uses a mobile device, such as an Apple iPhone or Google Pixel to begin gathering data.

How It Works

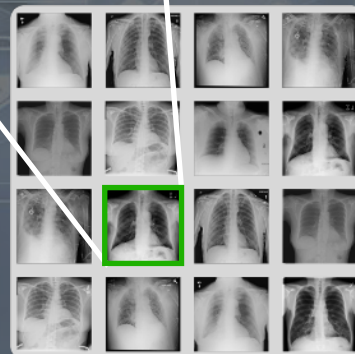
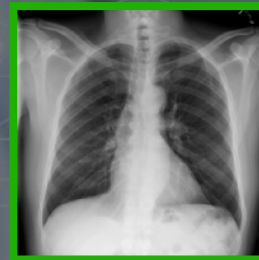


Results are typically received in 4 seconds or less. From there, images may be discarded or uploaded to clinic databases for further analysis.

Reticle Retina

Notable Capabilities

- 2D and 3D infrared mapping of the human and animal eye
- Instantaneous results: average response time on a validated Reticle model is 0.25 - 4.00 seconds
- Artificial-intelligence-based analysis and prediction based upon multiple proprietary machine learning architectures
- Encrypted archiving of observed optometry data
- Encrypted data storage and custom database (if desired)
- Export high resolution images with customized metadata for later analysis on clinic instruments
- Relieve costs of expensive equipment
- Relieve cost of unnecessary staff
- ***Detect critical conditions earlier and easier***

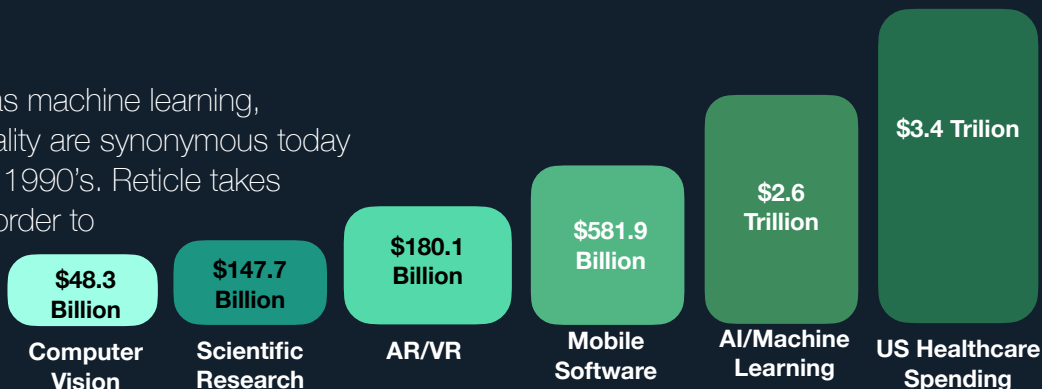


An image illustrating Reticle's success in detecting pneumonia in chest radiology X-ray images. Reticle's capabilities can be tailored to expand scope and learn entirely new tasks as needed.

Reticle's Market Advantage

Development in technologies such as machine learning, computer vision, and augmented reality are synonymous today to the state of the internet in the late 1990's. Reticle takes advantage of these technologies in order to provide tomorrow's solution to healthcare today.

Sources: Multiple - Seekar Proprietary



Detect critical health conditions earlier and more accurately with Seekar

Contact Us

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