

corti

# We need to think differently about medical diagnosis.

88 out of 100 seriously ill patients will get an incorrect or inadequate diagnosis from their primary caregiver. 12 million people are misdiagnosed each year in the US, at a cost of \$750 billion.



VIII. EAR INSTRUMENTS.  
EAR TRUMPETS, Etc.



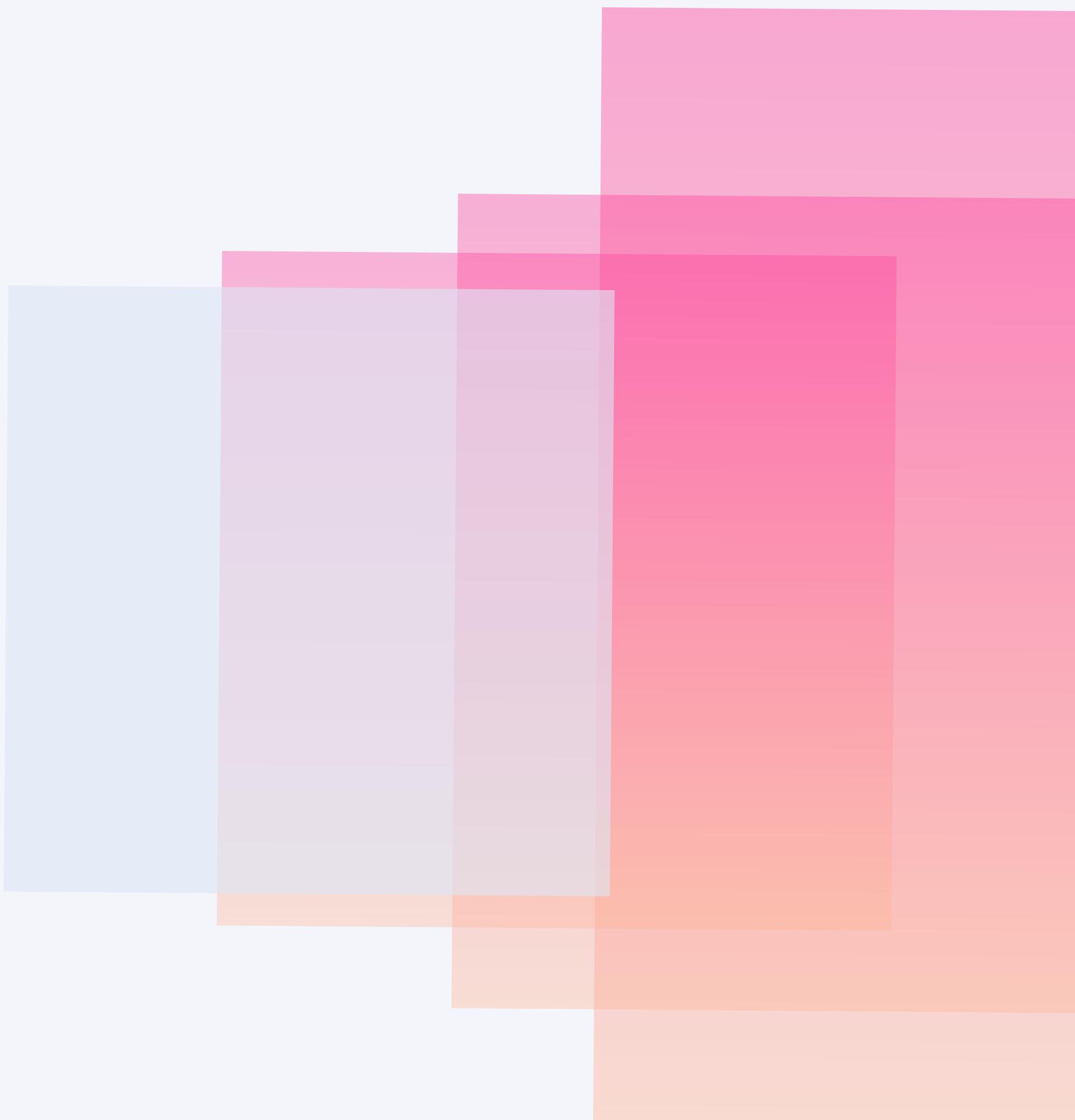
We have been **augmenting** humans for ages.



A photograph of a man in a dark suit and glasses playing a game of chess against a computer. He is looking down at the board, which is set up on a light-colored wooden table. To his right, a computer monitor displays a chess interface. A small American flag sits on the table between the chessboard and the monitor. The scene illustrates the theme of decision support systems in strategic planning.

Corti is a **decision support** system.

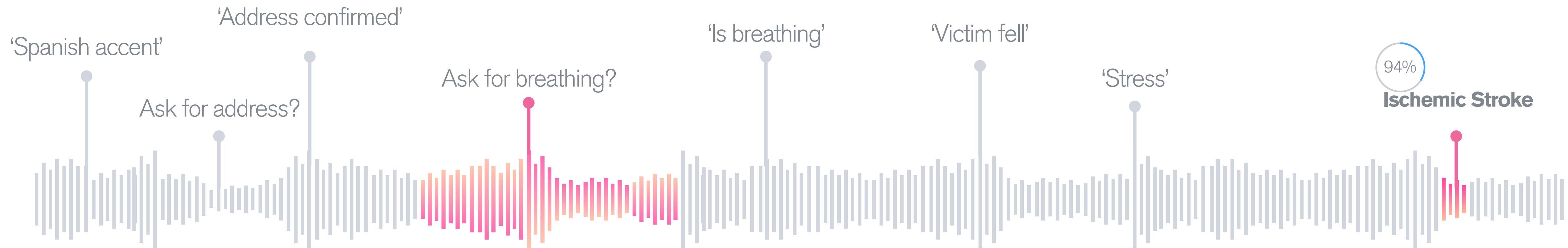
We imagine a future where  
artificial intelligence enhances the  
decision-making of healthcare  
professionals in real-time.



We started where it **matters the most.**



By helping medical professionals through conversations we can ensure a fast coherent path towards the right treatments.

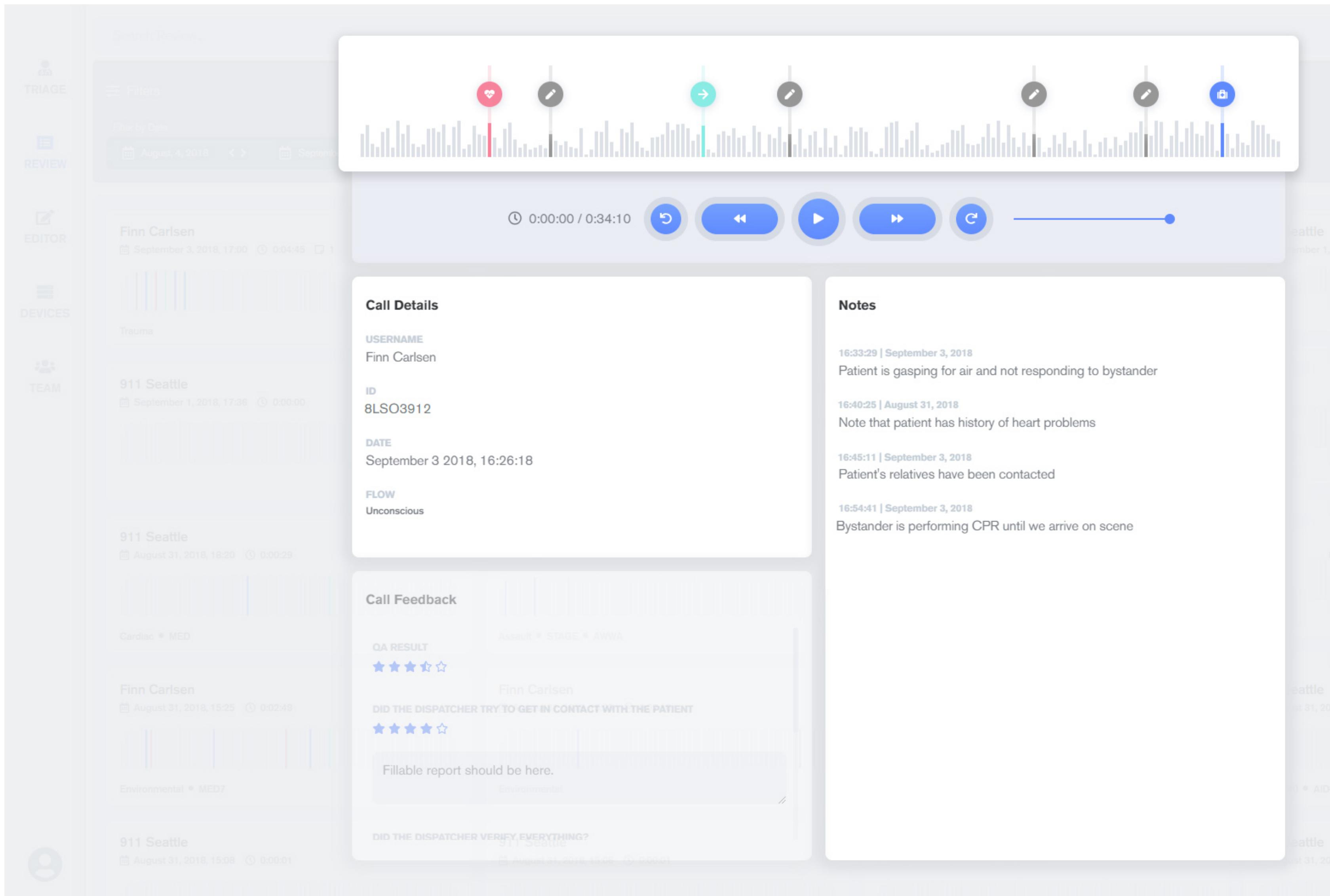


# Intelligent software that helps throughout the conversation.

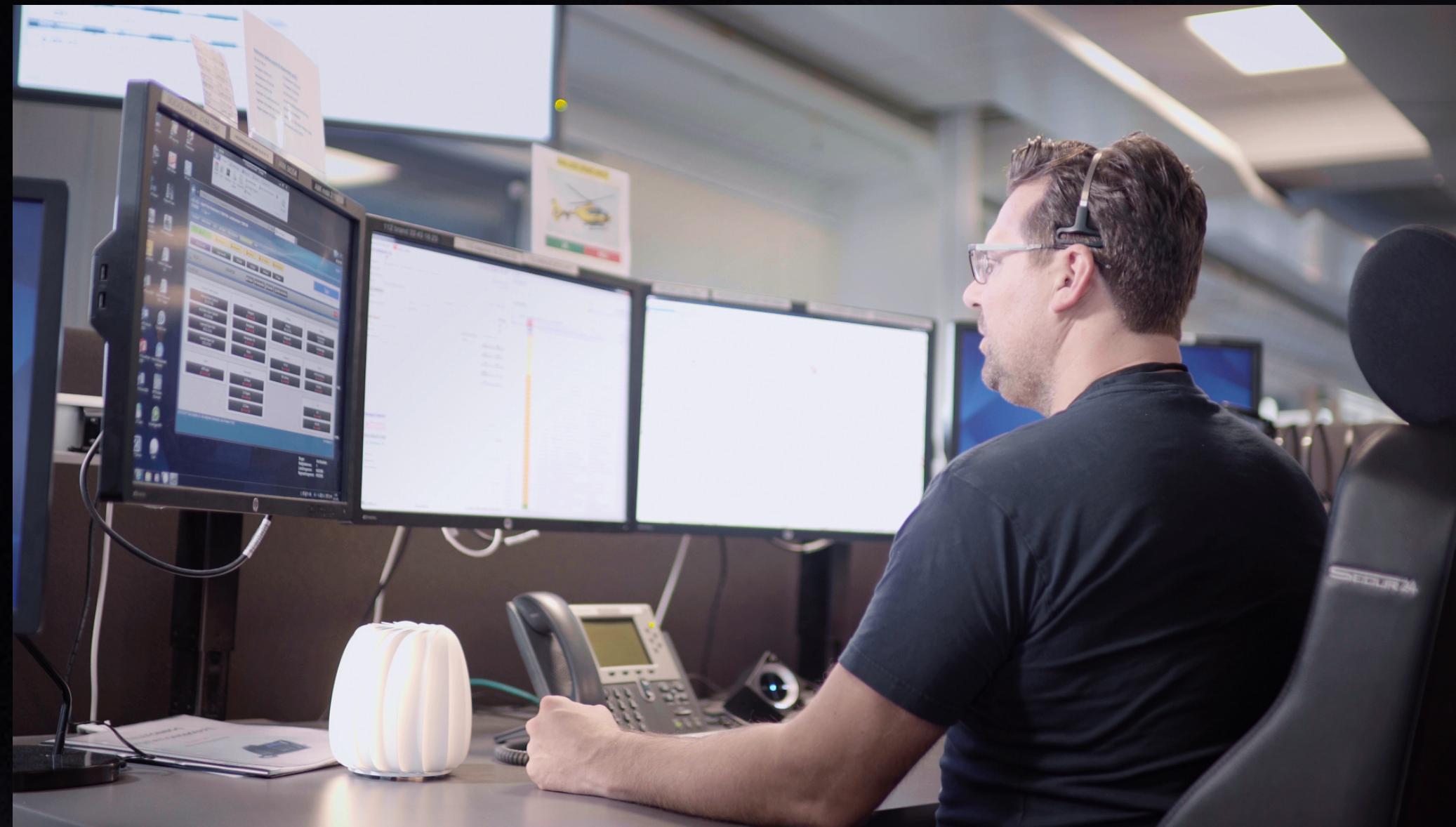
The screenshot displays a mobile application interface for medical dispatching. The top navigation bar includes 'Caller Details' with a blue arrow button, 'Dispatch MED7' with a blue arrow button, and a 'Details' dropdown menu. On the left, vertical tabs for 'FIRE' and 'MED' are visible. The main content area is divided into several sections:

- Suggested Diagnosis:** A list of potential conditions with confidence levels:
  - Unconscious**: 80% Confidence. Keyword, keyword, keyword, keyword, keyword.
  - Cardiac**: 80% Confidence. Keyword, keyword, keyword, keyword, keyword.
  - Overdose**: 80% Confidence. Keyword, keyword, keyword, keyword, keyword.
- Manual Diagnosis:** A search bar labeled "Search protocols".
- 题主 Unconscious:** A section titled "Not breathing normally". It includes a question "Major Trauma-related?" with a MED 7 icon and 43% Confidence, followed by "Yes" and "No" buttons. A note states: "Reminder: Have high index of suspicion of unconsciousness before considering that the patient is merely down and unresponsive."
- Suggested Questions:** Two questions with MED 7 icons and 43% Confidence:
  - "Major Trauma-related?" with "Yes" and "No" buttons.
  - "Major Trauma-related?" with "Yes" and "No" buttons.
- Suggested Diagnosis:** A question "Drowning-related ?" with a MED 7 icon, followed by "Yes" and "No" buttons. A note states: "When sending a MED7, an on scene AED is indicated in all cases except:
  - Children < 8 years old
  - Trauma (including drowning and hanging)Pre-arrival: A section for entering pre-existing conditions with a placeholder "Enter conditions..." and a right-pointing arrow button.

# Analytics tool that helps in optimizing future conversations.



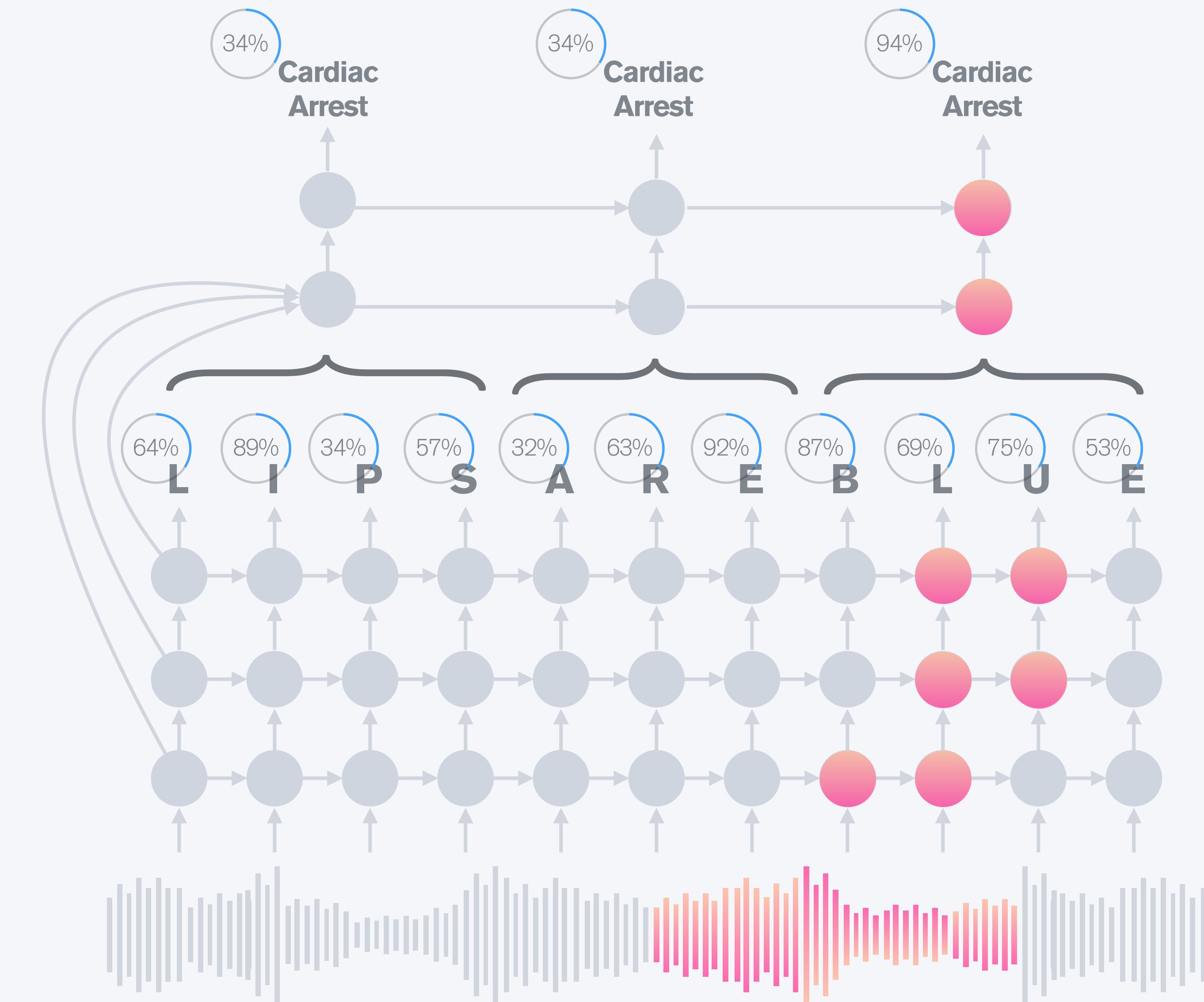
Deployment is made easy.  
Meet Corti Orb.



# Medical evidence is key.

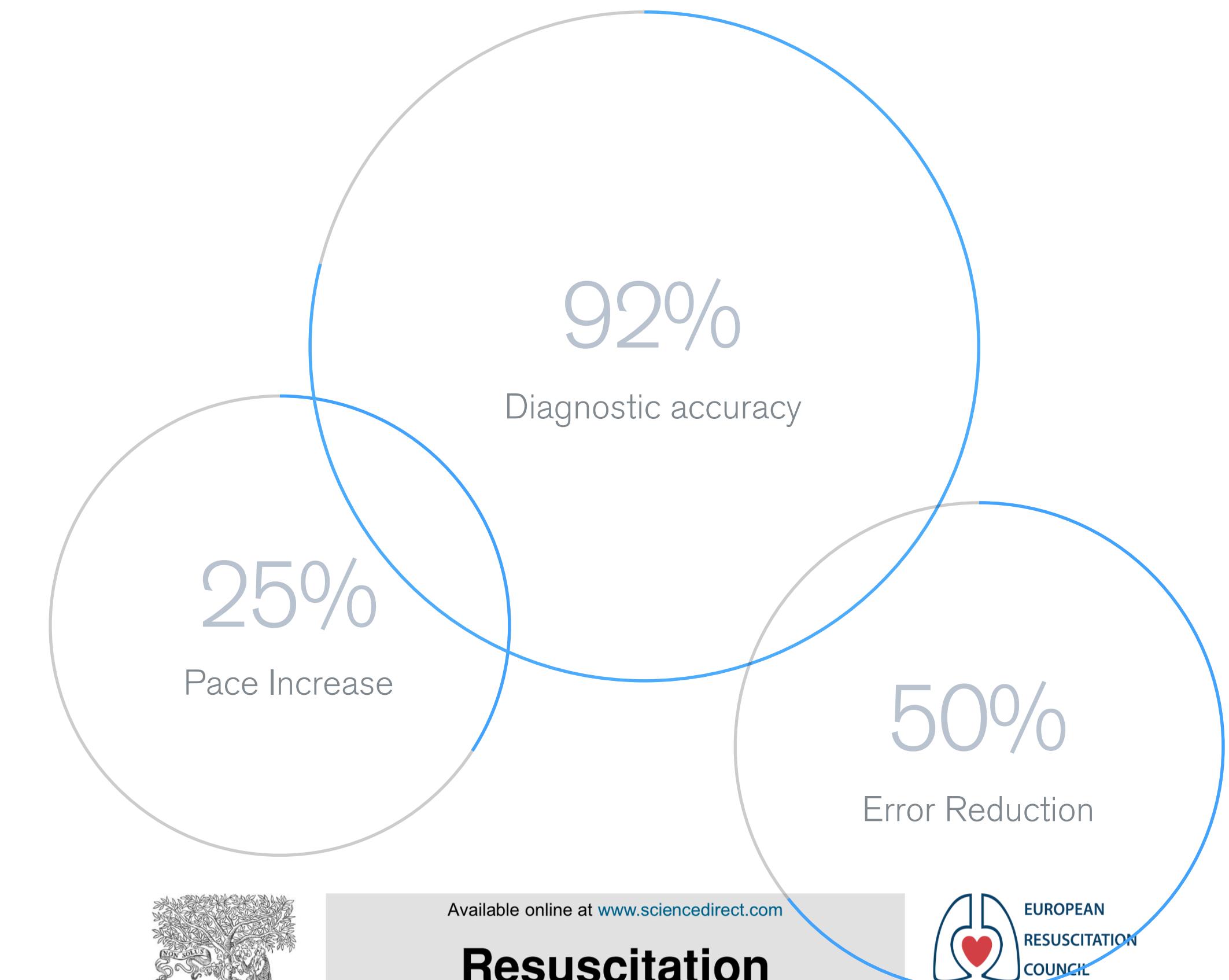
**UW Medicine**  
HARBORVIEW  
MEDICAL CENTER

UNIVERSITY OF  
COPENHAGEN



“This is an innovation with the potential to permanently change the way Emergency Medical Services handle emergency calls”.

Freddy Lippert, MD, CEO Emergency Medical Services, Copenhagen



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## Resuscitation

journal homepage: [www.elsevier.com/locate/resuscitation](http://www.elsevier.com/locate/resuscitation)



Clinical paper

### Machine learning as a supportive tool to recognize cardiac arrest in emergency calls

Stig Nikolaj Blomberg <sup>a,b,\*</sup>, Fredrik Folke <sup>a,b,c</sup>,  
Annette Kjær Ersbøll <sup>d</sup>, Helle Collatz Christensen <sup>a</sup>,  
Christian Torp-Pedersen <sup>e,f</sup>, Michael R. Sayre <sup>g</sup>,  
Catherine R. Counts <sup>g</sup>, Freddy K. Lippert <sup>a,b</sup>

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<sup>b</sup> Department of Clinical Medicine, University of Copenhagen, Denmark

<sup>c</sup> Department of Cardiology, Gentofte University Hospital, Denmark

<sup>d</sup> National Institute of Public Health, University of Southern Denmark, Denmark

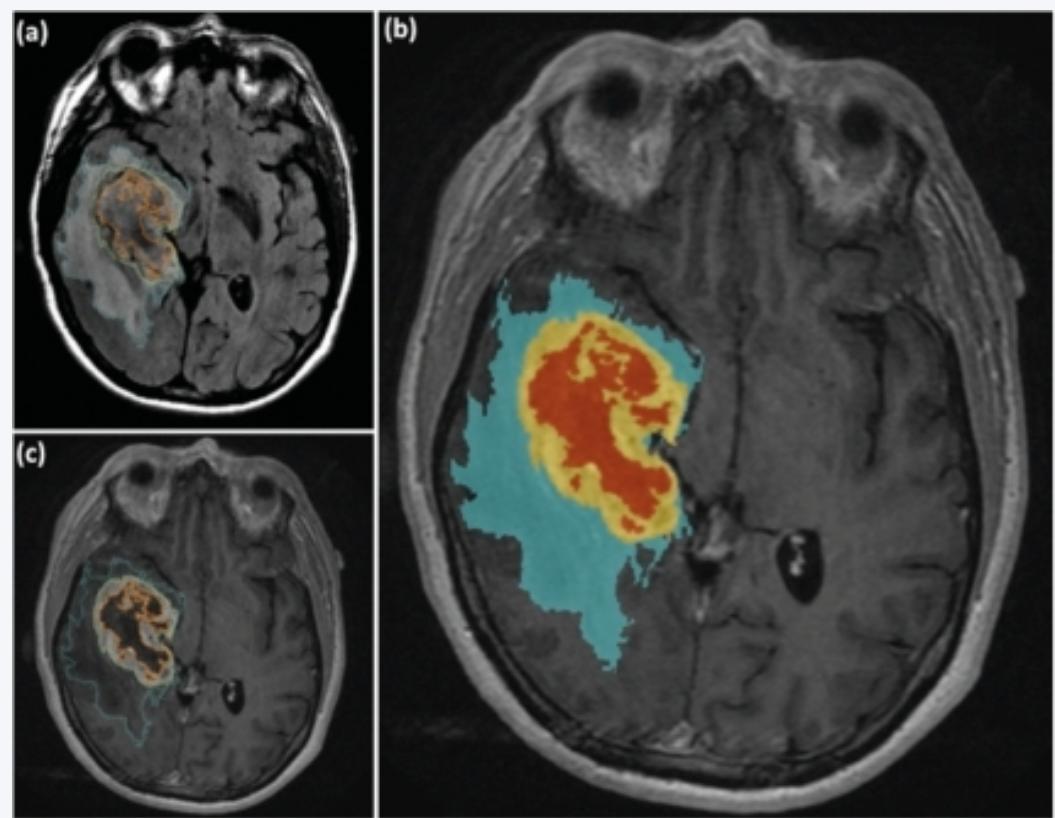
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<sup>f</sup> Department of Health Science and Technology, Aalborg University, Denmark

<sup>g</sup> Department of Emergency Medicine, University of Washington, United States

We need to know what we don't know.  
Generative models are our hope.

Tumor prediction



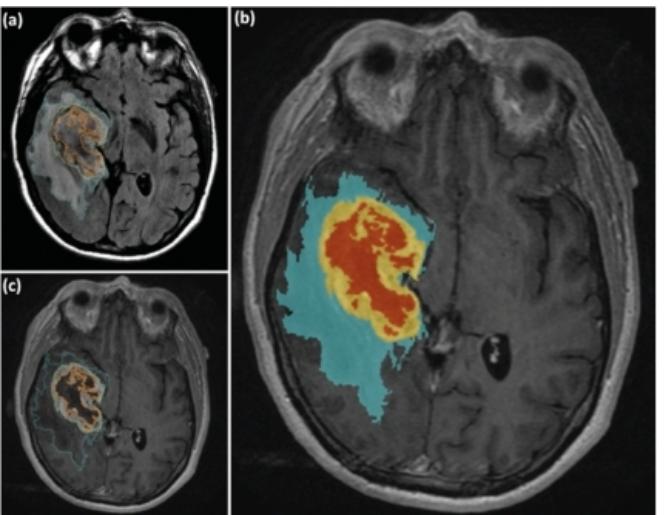
Autonomous driving



High-frequency trading



# An example of ongoing research at Corti...



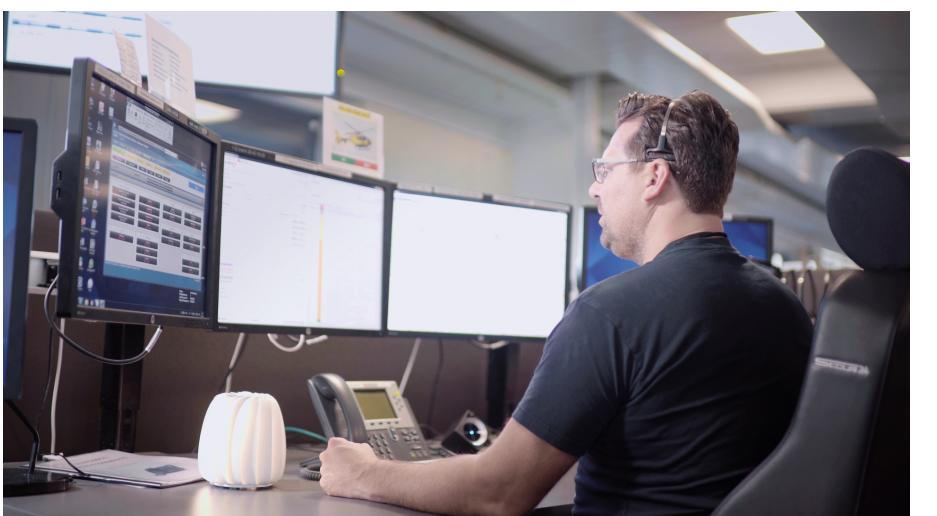
## DO DEEP GENERATIVE MODELS KNOW WHAT THEY DON'T KNOW?

**Eric Nalisnick<sup>\*†</sup>, Akihiro Matsukawa, Yee Whye Teh, Dilan Gorur, Balaji Lakshminarayanan<sup>\*</sup>**  
DeepMind



### ABSTRACT

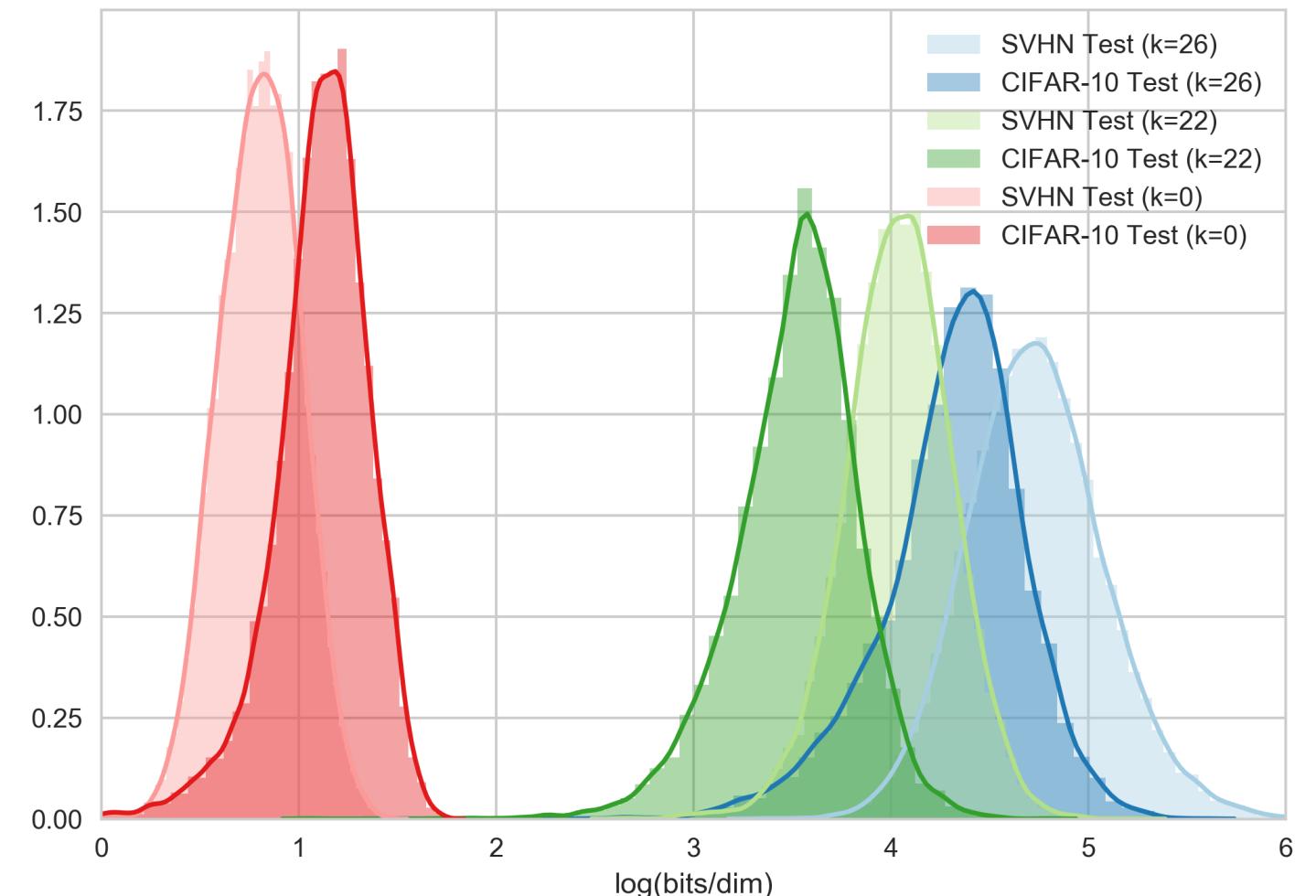
A neural network deployed in the wild may be asked to make predictions for inputs that were drawn from a different distribution than that of the training data. A plethora of work has demonstrated that it is easy to find or synthesize inputs for which a neural network is highly confident yet wrong. Generative models are widely viewed to be robust to such mistaken confidence as modeling the density of the input features can be used to detect novel, out-of-distribution inputs. In this paper we challenge this assumption. We find that the density learned by flow-based



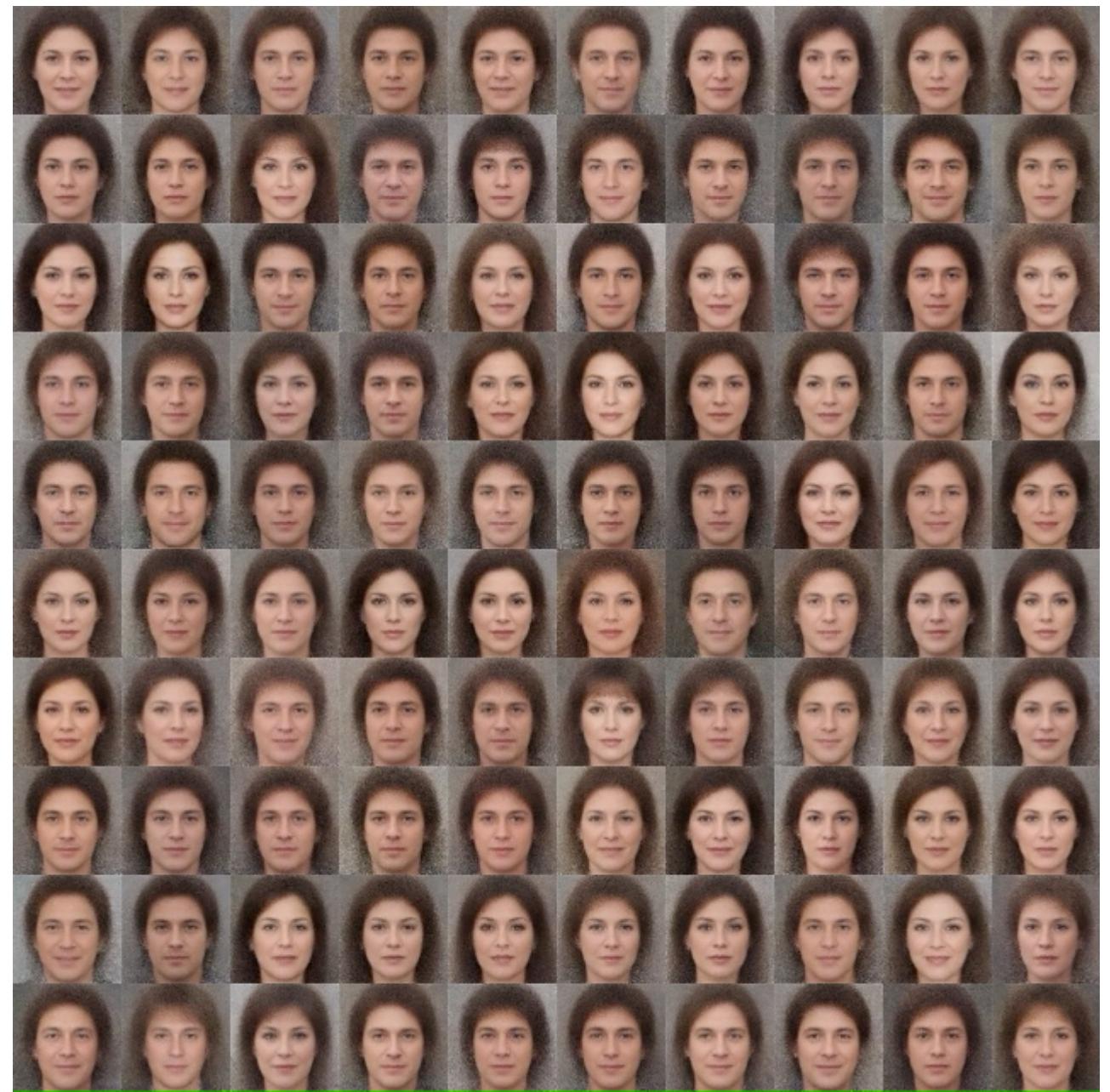
# An example of ongoing research at Corti...

**Probabilistic latent variable models** have intriguing properties that we are exploiting for anomaly detection, semi-supervised learning, active learning, data augmentation etc.

$$\begin{aligned}\log p_{\theta}(x) &= \log \int_{\mathbf{z}} p_{\theta}(x, \mathbf{z}) d\mathbf{z} \\ &\geq \mathbb{E}_{q_{\phi}(\mathbf{z}|x)} \left[ \log \frac{p_{\theta}(x|\mathbf{z})p_{\theta}(\mathbf{z})}{q_{\phi}(\mathbf{z}|x)} \right], \quad \mathbf{z} = z_i, \dots, z_L\end{aligned}$$



Uncertainty estimations when utilising the latent variables of the PLVM.



Samples generated from a PLVM where we sample close to the mode of the distribution of the latent variables towards the full distribution.

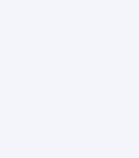
Corti was founded in 2016 in Copenhagen and is backed by a group of dedicated investors. Our team consists of top scientists, developers, and designers from reputable organizations.

Come and join us!

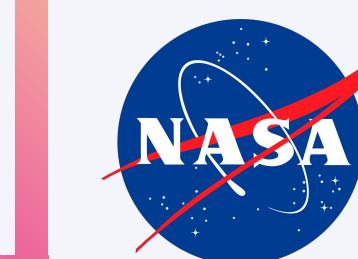


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