

Explaining True Focus & True Noise Reduction

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Learning Outcomes

1

Describe how Beltone's Intelligence Augmented approach to artificial intelligence empowers patients to take control of their hearing experience.

2

Compare our True Focus to Clear Focus, Ultra Focus 2 and Ultra Focus.

3

Explain the differences between True Noise Reduction and Sound Cleaner Pro.

4

Explain how Beltone achieved a balance between DNN chip efficiency and battery life.

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Risks/ Limitations

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- The applicability and accuracy of the course content may vary by the clinical, geographical, and cultural context; you should evaluate the course accordingly.
- As healthcare is rapidly evolving, new findings may change the validity of the information presented in this course. Providers should always consult the latest research and guidelines from professional associations.
- The interventions discussed in this course may be limited in generalizability, requiring practitioners to consider specific individual and population factors.
- The course may not cover all possible risk factors, diagnostic methods, or treatment options, and complex cases may require additional considerations.
- Healthcare providers should apply cultural competence and sensitivity to ensure effective and respectful care based on their patients' diverse needs.
- Providers should always evaluate the limitations of diagnostic and screening tools, considering their potential for false results as well as any ethical implications.
- It is the responsibility of course participants to critically evaluate the evidence from multiple sources to guide professional practice.

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Intelligence Augmented



Hearing loss disrupts the brain's natural sound-processing power



Hearing technology with AI still can't fully adjust to your listening preferences

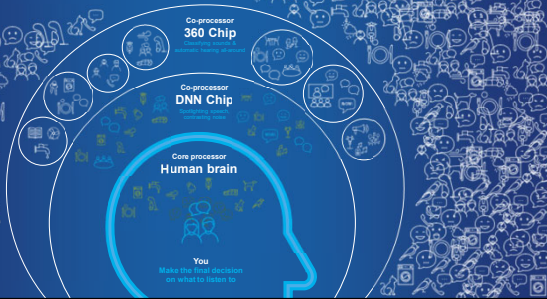


Combining the brain's natural processing with AI when extra help is needed

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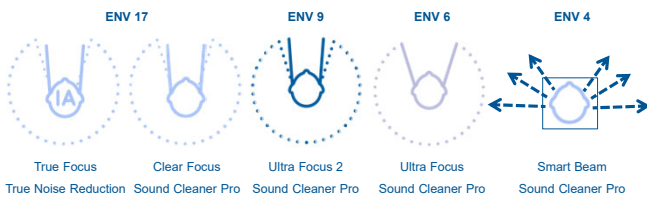
DualChip, Triple Processor



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Hear in Noise Program



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Clear Focus (upgraded beamformer)

- Full low-frequency directional response
 - Maximizes the effectiveness of our noise reduction system

The diagram illustrates the Clear Focus beamformer system. It features a frequency response graph with a blue box labeled '4 microphone weighted beamformer' from 250 Hz to 5 kHz, and a green box labeled 'Fixed directional' from 5 kHz onwards. To the right, a microphone layout shows four microphones in a circular arrangement with a central pickup pattern.

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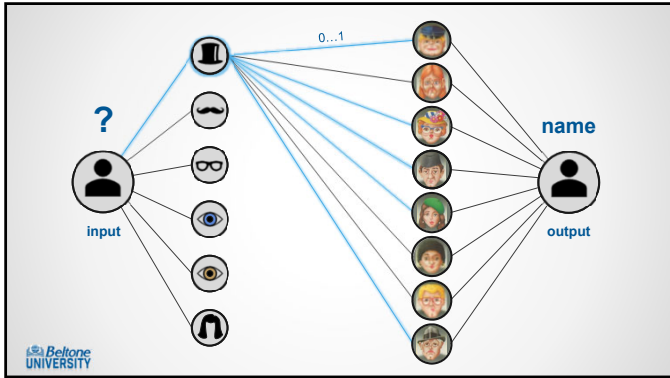
When you search for DNN this is what you get

The diagram shows a DNN architecture with an input layer (5 green nodes), three hidden layers (each with 5 blue nodes), and an output layer (2 red nodes). Arrows indicate the flow of information from input to output.

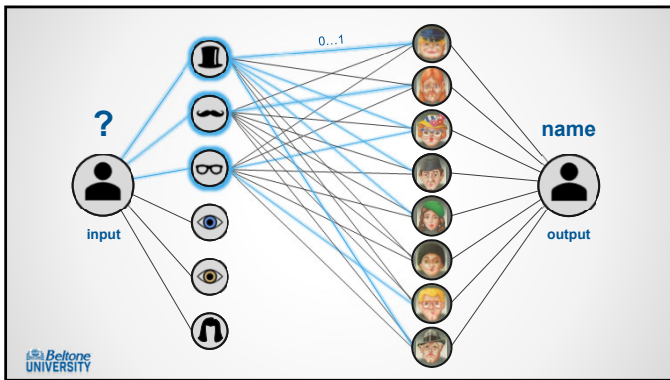
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The diagram illustrates a face recognition neural network. On the left, an 'input' node (person icon) is connected to seven feature nodes (hat, mustache, glasses, eye, eye, eye, nose). On the right, an 'output' node (person icon) is connected to seven face image nodes. The output is labeled 'name'.

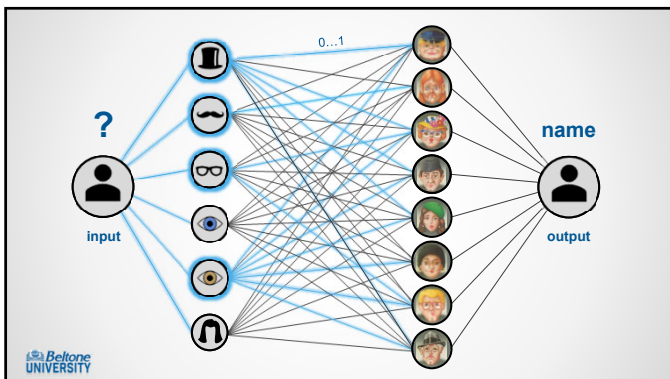
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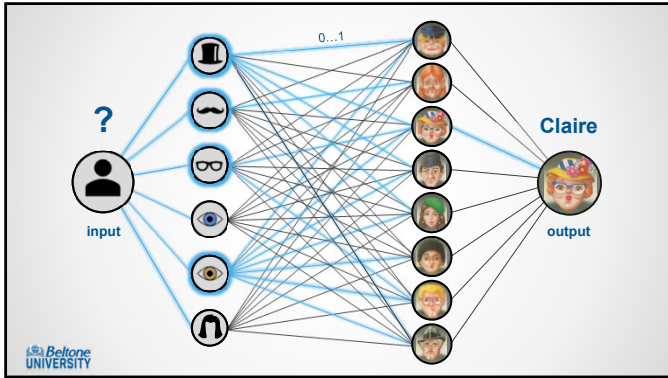
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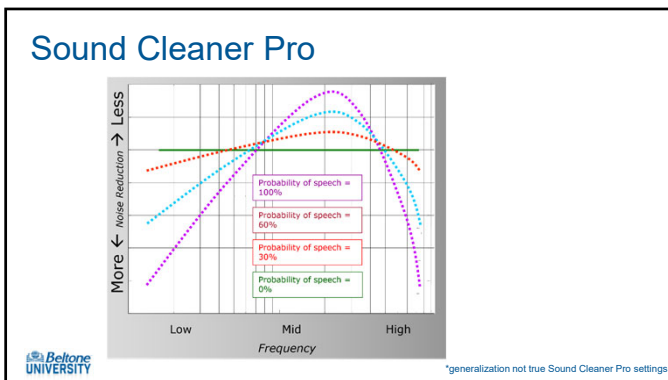
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17 Times More Efficient*



DNN architecture optimized for efficiency and longer battery life



DNN trained with 13.5 million real-life speech sentences in noise



DNN applied together with directional beamformer

*compared to other leading brands with 6-microphone and DNN noise reduction

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All-day Battery

Hours of use



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Summary

- 1 Beltona's Intelligence Augmented empowers patients to take control of their hearing experience.
- 2 Clear Focus uses full band directionality and is seen with our 17 level 63 and 64 RIEs and True Focus with our microRIE.
- 3 True Noise Reduction uses an efficiently trained deep neural network to more precisely remove background noise.
- 4 Using quality over quantity we have a smaller more efficient hearing aid that uses the same amount of battery as our previous family.

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