MAN VS MACHINE

How Presentr is Bringing Hard Data to Soft Skills



Introduction

Back when we first envisioned Presentr – a personalized mobile communication skills coaching app – we knew we were onto something big. Yet we weren't initially sure exactly what role a 'machine' had in this conversation: Could Presentr replicate the interaction with an experienced, human coach? And if so, how would we determine the accuracy of the technology's analysis?

A recent engagement at a large pharmaceutical company unexpectedly afforded us the opportunity to find out. In short, what we learned is that we *can* quantify how Presentr stands up to the human coaching experience – and we *can* corroborate Presentr's outcomes in a professional setting. The results are compelling: 70% of the speakers selected by the coaches as top presenters scored above the average, as measured by Presentr, indicating that they were in the top tier of the overall speakers. This alignment between Presentr scores and the coaches' assessments validates our goals and supports our vision for the future.



A Machine/Coach Mashup

Presentr was developed to address the growing communication skills gap. In 2018, Jeff Weiner, CEO of LinkedIn, reported findings of a study they conducted with their members along with talent leaders across the United States to understand what skills were lacking in the workforce. The study conclusively indicated that communication represented the largest skills gap in the American workforce. This report supports our objective to address the need for sustained learning and feedback and to try to quantify and gamify the experience to create stickiness and ongoing use.

We set out to utilize Machine Learning and Artifical Intelligence (AI) to create a tool that people can use to become more confident presenters or to overcome the common fear of public speaking. Before Presentr, the only option – and it's an expensive one – was professional coaching, whether privately or in a group setting. Our challenge was to integrate the best of what coaching would provide with an 'anytime/ anywhere' customized, objective advantage.

Our starting point was the four key pillars of communication skills that coaches typically coach to (more on those skills later). We built algorithms





around these assessments to teach Presentr to identify what strong speaking skills look like. This is a continuous process: As we collect more information about users and gain more insights, Presentr uses that data to provide more refined and detailed assessments. Like a human coach, after observing dozens, hundreds and thousands of speakers, Presentr can utilize its experience and data knowledge to provide customized and meaningful feedback and coaching. Except, unlike humans, Presentr has no subjective bias. It's not unlike the process for programming surgical robots. Robotics companies map every movement a human surgeon makes: the angle of their hands, the amount of pressure they apply in manipulating their tools, the speed with which they handle their instruments. Similarly, we built algorithms based on the core tenets of coaching that measures eye contact, posture, voice modulations, and gestures that the most effective speakers demonstrate.

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Presentr does have limitations. For example, it can't measure charisma – human coaches have the advantage there. But what Presentr can do *better* than humans is to analyze all four skills simultaneously. Even the best human coach, by nature, cannot process all skillsets at once and may focus on someone's soft-spoken voice and not be able to pay full attention to their posture at that moment.

We often think about the abilities of a speaker in a similar way to how one evaluates a figure skater. In competition, performers are scored both on artistry and technical performance. A good speaker has both technical mastery of the skills and artistic quality to capture the audience's attention. With the introduction of Presentr, we can now integrate the ability of coaches to perceive the nuances of a speaker's capabilities with the precision of what a machine can measure to create the perfect outcome – the ability to quantify, *simultaneously and objectively, what was heretofore subjective*.



What we learned is that Presentr – a standalone tech product – matches up very closely with the results you'd get from a human coach. Good **can** be defined objectively and quantified.



Findings – Unintentional and Otherwise

Back to that pharma engagement. Our team was brought in to conduct training for 178 speakers, who were broken down into 20 smaller groups for one-hour communication skills workshops focusing on tips and techniques. Ten highly experienced communication skills coaches on our team were each assigned to work with two groups. During the workshops, each participant was scored by Presentr on each of these four key aspects of nonverbal presentation delivery:

- VOICE how a speaker exhibits passion
- EYE CONTACT how a speaker engages the audience
- GESTURE how a speaker demonstrates expressiveness
- POSTURE how a speaker portrays confidence

In a typical engagement of this kind, the coaches would review the Presentr scores and use the data to coach and provide feedback. In this case, however, time constraints prohibited the coaches from seeing the Presentr scores. Instead, the coaches simply coached based on their own individual experience and expertise, and the data was used later to provide the client with an assessment of the speakers. After the workshops were completed, the coaches were asked to identify the three 'best' speakers in each of their two groups, for a total of six speakers per coach, or 60 individuals. We, therefore, ended up with two separate data sets: Presentr's scores and coaches' rankings.

Bingo! A unique opportunity to validate our expectations about the alignment between Presentr scores and those of a coach.



The Data

We then broke down the coaches' rankings for each participant (subjective) and compared them with Presentr's scores for each participant (objective).

We analyzed the data in several ways:

- Top speakers overall (as a full group of 178);
- Top speakers within each group; and
- Alignment of coaches' rankings within each group.

The results strongly confirmed what we intuitively believed to be true – that Presentr's scoring

strongly aligned to that of a human coach.

We started by compiling a Stack Ranking of all speakers based on their overall Presentr score and then overlaid the top speakers as selected by the coaches. Based on the data, 70% of the speakers selected by the coaches as their top presenters scored above the average, indicating that they are in the top tier of the overall speakers, as determined by Presentr.

Skillset	Average Score	Top Speakers
Overall (Presentr Score)	66	70% above average
Voice	68	63% above average
Eye Contact	57	62% above average
Gesture	77	60% above average
Posture	62	72% above average

What stands out is that 41% of the speakers selected by the coaches scored in the top third of the overall list of speakers – a noteworthy figure given that if we had just selected randomly, only 33% of the speakers should have shown up in the top third. We saw a very validating pattern emerging: Presentr was able to identify strong communication skills in rough alignment with the human coaches. We also looked at the data by coach. Roughly 66% of the time, the coaches had at least two of their top picks in the top three (as scored by Presentr) in at least one of their groups. And for each coach, we were able to determine the specific skill categories where the alignment between their assessments and Presentr's was strongest – all of which will inform our software refinements going forward.

Conclusions

The findings from this engagement are extremely gratifying. With 30 million PowerPoint presentations delivered each day, we know that people rely heavily on their communication skills to conduct business. At the same time, we know that 75% of individuals report being terrified of public speaking.

We can now confirm what we always suspected: Effective communication skills can be defined objectively and quantified. And with Presentr, we can mitigate subjectivity, while affording privacy to those who want to improve their skills without risking performance (coach) anxiety.

This organic – and unexpected – exercise provided an optimal setting to prove the power of Presentr and to demonstrate that it matches up quite well with a cohort of talented, experienced coaches. As we continue to collect data, we will focus on helping Presentr learn (ie, improving our algorithms) and incorporating the feedback we get from coaches. In this way, we can continuously improve Presentr and provide the most effective experience for our clients.

