Leadership Challenge Experiences: Personalization without Bias

Case Study:
Center for Creative Leadership | SymphonyAI Accelerate

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Introduction

Over the past fifty years, the Center for Creative Leadership® (CCL) has been committed to "advancing the understanding, practice, and development of leadership for the benefit of society worldwide." This commitment has manifested in leadership development programs to over one million leaders in more than 170 countries.

Coupled with decades of research and data collection, CCL has accumulated rich datasets with the power to provide insights into leaders' challenges and opportunities. To unlock these insights, CCL partnered with SymphonyAI to uncover valuable findings about leaders' key challenges and combatting unintentional bias in leadership programs.

The Challenge

As part of leadership development training and research initiatives, CCL collects information on leaders' top managerial challenges. Participants respond to an open-ended question asking for a list of the top three leadership challenges they currently. To date, data has been collected on nearly 60,000 challenges collected from 20,000 mid-level and senior managers. Rather than considering challenges in isolation, CCL wanted to identify common combinations of challenges. These challenge experiences, created using a novel AI algorithm, could be used to curate personalized leadership development offerings that directly address the most salient challenges. Identifying challenge experiences would also benefit leadership development experts and researchers by providing unique and nuanced insight into the everyday challenges that matter most.

Despite the potential benefit of identifying these challenge experiences, CCL recognized a potential for bias within their data. Survey respondents who reported traditionally underrepresented gender identities or race/ethnicity were not equally represented in the CCL's data. In fact, two-thirds of responses were provided by men, and a majority of those were white men. One of the most important issues CCL wanted to address in this program was how to avoid bias in the identified challenges. To do so, CCL realized they needed to create a model that would apply to future leaders who would hold more diverse backgrounds than the lopsided dataset.

CCL's goal expanded to address two questions: 1) WHAT are the challenge experiences that leaders report? And 2) WHO experiences those challenges? Can we create a model that demonstrates which challenges are not solely dependent on race or gender? CCL data scientists wanted to develop challenge experiences that minimized biased in any given challenge experience profile and draw lessons from instances where biased might have been at play.

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The Solution

CCL turned to SymphonyAI's EurekaAI platform for a solution, leveraging topological data analysis (TDA) modeling techniques to reduce potential bias in challenge experiences. Specifically, data scientists examined whether leaders with different social identities were over- or under-represented in certain challenge experiences. This novel approach first oriented the models around the leadership challenges identified by program participants and then overlaid demographic filters to assess for bias.

The approach categorized groups of leaders by similar challenges rather than their social identities like gender or race.

Once CCL data scientists identified challenge experiences agnostic from demographic information, they then explored whether individuals with different backgrounds were more or less likely to be categorized as having different challenge experiences.

They did so by examining whether the demographic distribution of survey respondents varied across challenge experiences, identifying potential data bias. This step served as a sort of quality assurance, allowing CCL experts to ensure they were not unwittingly producing a biased profile.

Despite best efforts to ensure that challenge experiences did not represent a single social identity, some instances emerged where only white or black professionals appeared in a given challenge experience. These insights provided concrete examples where bias MIGHT have been at play in the development of challenge experiences. Race, gender, and other demographic aspects clearly played a more pervasive role than could easily be addressed by standard methods, and this was exacerbated by the original data used, which over-represented white men.

Results suggested that, while older white participants still characterized most of the sample, individuals who identified as Black, Asian, or Hispanic/Latinx were well distributed across the final set of identified challenge experiences. The same pattern was found for leaders who identified as female.

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What everyday challenges do leaders experience?

The challenge experiences that emerged fell into ten categories for those in the higher-level Leading Managers category, with eight challenge experiences identified for the mid-level Leading Others stage.

Ten Identified Challenge Experiences for Leading Managers:

1. Balancing
2. Influencing
3. Co-elevating
4. Advocating
5. Optimizing
6. Iluminating
7. Adapting
8. Connecting
9. Discovering
10. Stretching

Each challenge experience represented a combination of challenges leaders reported facing. For example, Balancing leaders focus on aligning people and their relationships as they work to attain goals and maximize success. The Balancing experience was characterized by challenges such as staffing issues, competing people and project priorities, and navigating a challenging business context.

Mindfulness Over Colorblindness

To say AI made CCL's profiling process colorblind or bias-free would be an overstatement. Instead, AI enabled CCL to test for bias in their findings and uncover problem areas. Models that do detect bias help researchers to identify where that bias originated, why it appeared, and whether it could be extirpated from leadership profiles moving forward. Detecting bias also allows researchers to qualify their findings and refrain from overgeneralizing or perpetuating existing biases when sharing results.

CCL's work with EurekaAI provides an example of how AI can be an important tool to systematically assess novel research outcomes by uncover instances where latent biases exert outsized influence on results. Although CCL could not control variables that may give rise to bias—such as individuals' race, gender, and age—its research scientists could explore for potential bias that might temper any takeaways or conclusions from their work.

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Avoiding traps

From a quantitative perspective, EurekaAI's topological data analysis moved past traps often found in standard clustering approaches to data.

In clustering, multi-variant data is plotted to see which variables tend to be most associated with others.
While it is helpful to see multiple associated variables, most clustering models tend not to explore how these variables are connected and how changes can evolve connections to see how strong or weak they are. In other words, clustering tends to show relationships but does not provide a way to test how those relationships work.
To address this shortcoming, topological data analysis can yield new questions that can be tested in an ongoing process.

The EurekaAI platform enabled CCL to create a novel approach for personalizing leadership development for thousands of global leaders while avoiding biases in their personalized content recommendations.

This powerful use of technology helped CCL move from identifying simply where people are today on their leadership journey to developing personalized leadership journeys as they build skills and advance in their careers. Leadership development is a life-long journey, and the leadership experiences clearly reflect that.

The technology helped CCL identify and neutralized blind spots and biases that might hold back individual and team performance.

About CCL

The Center for Creative Leadership (CCL)® is a top-ranked, global, nonprofit provider of leadership development. Over the past 50 years, they've worked with organizations of all sizes from around the world, including more than 2/3 of the Fortune 1000. Their cutting-edge solutions are steeped in extensive research and our work with hundreds of thousands of leaders at all levels.

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About SymphonyAI

SymphonyAI is building the leading enterprise AI company for digital transformation across the most important and resilient growth verticals, including life sciences, healthcare, retail, consumer packaged goods, financial services, manufacturing, and media. In each of these verticals, SAI businesses have many of the leading enterprises as clients.

SAI is backed by a $1 billion commitment from Dr. Romesh Wadhwani, a successful entrepreneur and philanthropist. Since its founding in 2017, SymphonyAI has grown rapidly to a combined revenue run rate of more than $300 million and over 2,200 talented leaders, data scientists, and other professionals.

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