

## Use AI to drive learning objectives

Deliver intuitive, intelligent, and personalized learning experiences

### ABSTRACT

Adobe Captivate Prime's AI techniques address the challenge of scale that cannot be addressed by human operators. Powerful algorithms work to deliver learning that is most relevant to individual learners, and thereby drive learner engagement.

[Adobe Captivate Prime Product Management A 2021 White Paper](#)



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## The Objective

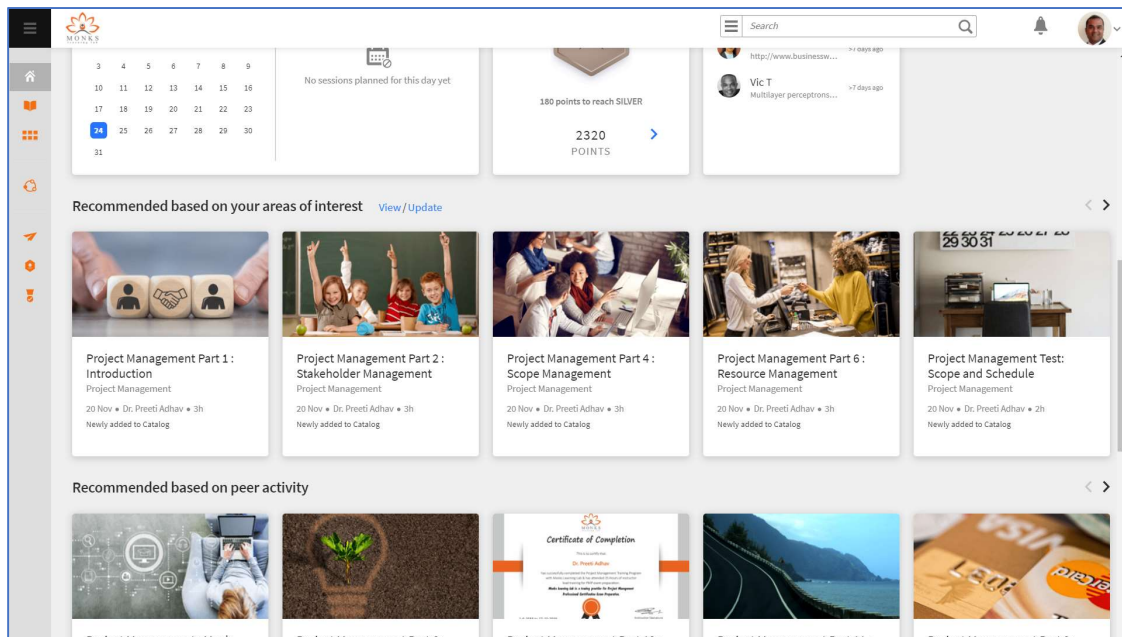
One of the key business drivers for any learning platform is the voluntary uptake of training content by learners. As an organization, you begin by building a learning platform. You analyze the needs of your employees, partners, or customers (depending on who your audience is), and you then spend a lot of time and money to create, buy, and make available large quantities of content for on-demand consumption. Increasingly, this means using a team of in-house Instructional designers to create content, source content from other business teams like Marketing, and buy off-the-shelf content from large content providers. However, the result is often a large content library with thousands of content assets, but low uptake of these trainings. Learners continue to treat the learning platform as a compliance platform, visiting only when pushed to take some trainings. Probably not what management intended as ROI.

The key challenge here is to not just make a repository of thousands of pieces of content available, but to also help the learner pick and choose, and to recommend the most relevant learning to them. This is called “Personalization of Learning” and to accomplish that for thousands of learners in real time is a task that cannot be achieved manually. Adobe Captivate Prime uses an AI-based recommendation engine to achieve this kind of intelligent sifting and driving of learning outcomes. Without this kind of AI enablement and because of the otherwise great manual effort required to unearth and search for the right content, learners could lose interest and their engagement with the platform would decline.

Another effective initiative to drive learners to seek more learning is peer recommendations. It would be to the organization’s advantage to encourage “social learning”, and drive peer to peer knowledge dissemination. A platform that allows learners to contribute to content by uploading articles, or other content files, and have a discussion with their peers about it, mimics how human beings learn in the physical world. However, the challenge is to ensure that quality of content uploaded by learners meets a certain threshold and does not overwhelm the system with irrelevant subject matter. Just as with personalized learning, this task also would be too overwhelming for humans to take on manually. Captivate Prime again addresses this task by employing Topic Modelling AI algorithms to evaluate UGC (User Generated Content) and determine that it does meet a threshold of quality.

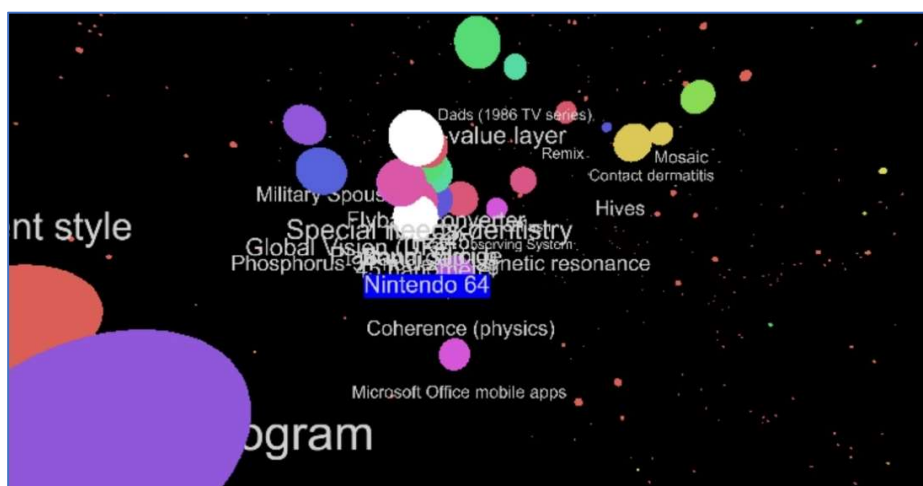


## Personalization of Learning



To personalize learning to an individual, there are AI techniques that identify and recommend the most relevant Trainings from amongst the thousands of pieces of trainings available. Therefore, as soon as a learner logs into the platform, they see content that is likely to be of immediate value and which they are highly likely to consume. Further, Captivate Prime's recommendation engine can reach out to the learner via email and other notifications to draw the learner to the platform. Some of the techniques that Prime employs are described below.

### A Universe of Skills and Jobs





As a first step, any AI based engine must be trained using data. The Captivate Prime engine comes to you with in-built knowledge and awareness of job titles, and related skills, gathered from a vast repository of industry data (job descriptions, anonymized resumes, related skills and other metadata). Captivate Prime currently boasts a “skills universe” of about 23,000 skills. The job/role map is made up of 70,000 job designations. Therefore, Captivate Prime has fair knowledge of skills required for each of these roles. A learner’s job/designation/role is made available to the platform on enrollment. The AI engine uses this information along with data from the job-skill universe to come up with recommendations for a specific learner. Captivate Prime further analyses all content that you import to the platform, tags them with skills from the skills universe and uses those tags to also feed into the recommendation of content to learners.

### Areas of User Interest

While the skills universe is a great starting point and helps Captivate Prime make recommendations right from the beginning just using a learner’s job designation information, it is not enough. Sometimes you may not have access or may not be able to consider a formal job designation as a relevant piece of metadata. E.g. Customer and/or partner education usually does not target specific job designations. Therefore, Captivate Prime is designed to go beyond and really understand a user’s area of interest by listening to various signals that the user provides through various interactions.

#### ➤ Skills – as selected by learner

Captivate Prime supports the concept of Skills which are essentially knowledge areas delivered by specific content pieces. These are configured specifically by the administrator pertaining to the organization’s custom business use cases. (These are in addition to the ones automatically generated by the platform as part of the industry skills universe). Captivate Prime then has a workflow where a learner is explicitly requested to choose from all the skills that the platform makes available to him/her. This is one way in which the platform learns about the learner’s areas of interest.

#### ➤ Skills – as assigned by the Admin

An admin is also able to assign Skills to learners based on specific triggers based on events that happen in the physical world (Learning Plans in Captivate Prime terminology) such as a promotion, relocation, assignment of a new sales territory etc. This powerful functionality then can map such events and automatically assign relevant skill areas to learners.



➤ Skills – as recorded by the LMS

Finally, as users interact with the platform and voluntarily take up trainings in various skill areas, the platform records **implicit signals** to augment the areas of interest for that learner:

- Enrollments – the enrollment trend seen for those courses i.e. is this a course that others are also enrolling in, therefore a popular one?
- Completion ratio for the trainings – is it a course that others have indeed completed, or have they dropped out of it halfway, indicating quality issues?
- Feedback provided by other learners (higher the feedback score, higher the recommendation).
- Date of publishing – a recently published course is more likely to have fresh content and therefore be of better quality.

Based on this information, the AI based recommendation engine scans, analyzes and chooses trainings that deliver the skills that are of interest to the learner. Captivate Prime can do this even for third party content that you may have integrated with the LMS.

### Peer Activity

While recommendations based on a learner's areas of interest are well tailored to the user, there is a strong case to be made for "discovering" new areas of interest.

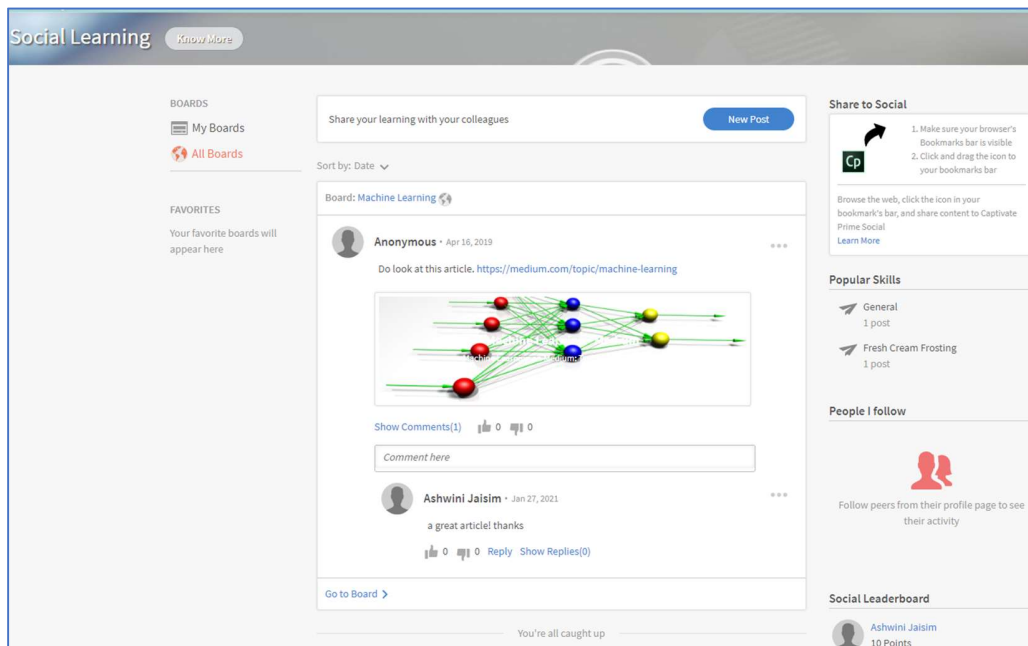
"You don't know what you don't know."

The fact is that as a learner, unless you know where the world is headed, you will not be able to keep up. This is where Captivate Prime uses a "Peer universe" to keep the learner abreast of the collective knowledge in an organization. As key individuals in your peer group start accessing new areas of knowledge, this information is fetched by the platform to you as a learner through the "Peer recommended" section of the AI functionality.

This list of recommendations is further curated for feedback, completion, enrollment and other pieces of data so that even when discovering new areas of interest, the platform helps you by only highlighting content that is fresh, has received good feedback and, in general, is a Training that is worth consumption.

### Content Curation for Social Learning

Captivate Prime encourages learners to share knowledge with their peers by uploading articles and other content that they think is beneficial. The Social Learning module in Prime lets learners upload content to "Discussion Boards" with each board tied to a specific set of skills.



Captivate Prime has a Curation Engine trained to recognize specific skill domains (Sales, Marketing, Finance, Technology etc.). The domains are based on industry analyses and the training of the AI algorithm uses vast public domain resources such as Wikipedia. These are a class of supervised topic modelling algorithms that, based on the training data, can effectively tag new data. Captivate Prime then uses the AI algorithms to determine whether the content being uploaded to a discussion board is relevant to that board or not. It then decides whether to allow that article to be posted or sent for manual supervision (by a subject matter expert). As with any AI algorithm, the decisions made by AI are subject to limitations of accuracy and therefore Prime allows for human/manual intervention as the final word.

## Conclusion

Adobe Captivate Prime's algorithms process data and optimize quantities and types of content (audio, video, text, eLearning, infographics, etc.) to meet a variety of parameters that dictate quality and relevance of content. With these data driven algorithms, Adobe Captivate Prime lets you drive learners to make training choices that would otherwise take longer to make or may even never be made. The data-driven learner experience, where AI identifies areas of role relevance and learner interest, searches for corresponding trainings, shortlists the most relevant, and recommends these to a learner, draws the learner in and drives learner engagement, while simultaneously saving valuable time and manual effort.