



METAVINE

Machine Learning and Application Development

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There is little argument amongst technology industry's analysts that the rate of application creation and device proliferation is set to grow at unprecedented rates. What are considered to be conservative estimates has the number of deployed devices exceeding 200 billion with over 25 million supporting applications in place by 2025. The volume of data associated with that number of applications is even more difficult to predict. Needless to say it's likely to exceed trillions of gigabytes in size.

The challenge we face as an industry is how do we create and support that number of applications to service the demand? The traditional development methodologies and outsourcing business models seem to be inadequate when considering the task ahead. Furthermore, the pace of application change compounds the problem. As businesses embrace a continuous innovation model to remain relevant in an ever increasing global market, so too must the applications adapt to support that innovation. By all measures, the demand upon the resources available to create and modify these applications is insufficient to meet the market need.

The traditional development approach has served us well for decades but we are now at a point of inflection. Current trends are seeing development tools and platforms beginning to empower a larger demographic of potential user. The term 'Citizen Developer' has appeared to imply that the development of applications is beginning to embrace a larger audience other than career software developers. The creation of applications is trending away from traditional application vendors and IT departments and moving more toward the business line where the domain expertise and competitive innovation originate.

We're currently witnessing an evolution of sorts. Several years ago, there was a lot of discussion around big data and investment made into big data ventures. That interest has now shifted to machine learning and will evolve again as the industry looks to the role of artificial intelligence. The three are not disconnected. Learning requires input which, in our scenario, is the data that we gather as a function of the applications we use. Artificial intelligence relies on that learning to apply action to that we deem relevant to the required task. That is, we need data to learn and learning to drive behavior. The industry today is still largely looking at machine learning without taking the next step to apply that learning to an actionable outcome in an automated or semi-automated manner.

At Metavine, we refer to actionable outcomes as a pattern of behavior. In our product we allow the definition of patterns as suites of related and non-related behaviors. These behaviors can be rapidly created, modified and reused to meet the exact needs of the business in real time. Additionally, the platform has been purpose built to empower developers and non-developers alike allowing the business the freedom to embrace either mode of deployment.

Underpinning the process of creating applications in the environment, are the principles of machine learning. It applies machine learning to the development process to accelerate application creation and reduce the risk of erroneous outcomes. This has the effect of not only getting an application to market significantly faster than previously thought possible, but also ensures a high quality of application delivery. The application of machine learning doesn't end there. All applications created using the platform are themselves machine learning solutions. These applications have the ability to identify behaviors in both their data outcomes as well as how they're used. The intersection between outcomes and how those outcomes were achieved provides insight into how the application itself can be modified to greater effect.

Machine learning will pave the way to artificial intelligence as big data did for machine learning itself. The next step in the application journey will be applications that apply their learning to evolve their behaviors to better serve our daily needs.