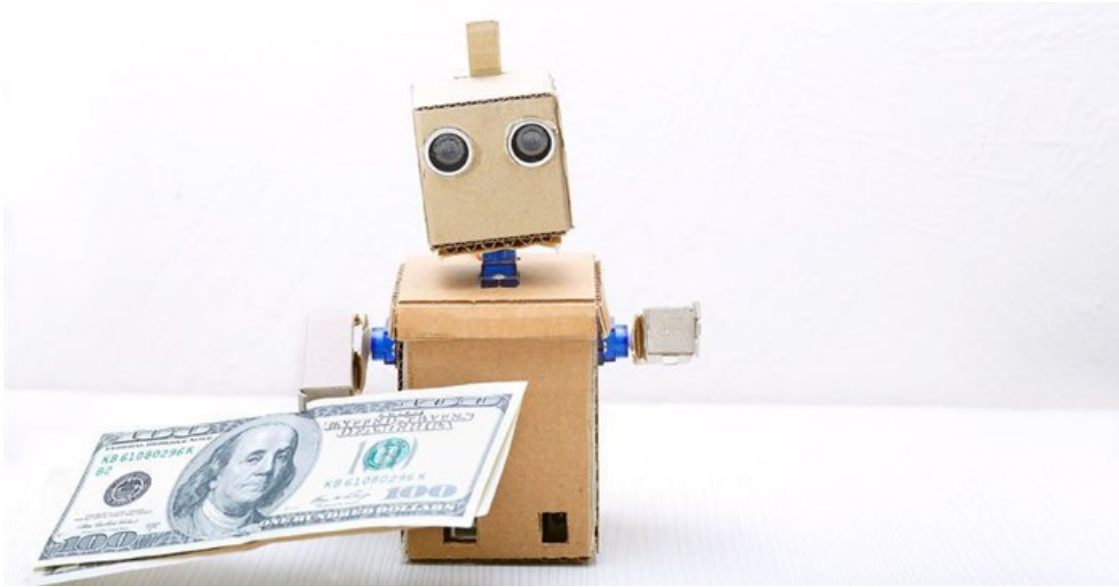


# Make the most of your money with AI and machine learning

 By [Bradley Elliott](#)

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Research firm Ovum predicts that by 2021 virtual digital assistants will be on 7.5 billion active devices by 2021, with smartphones and tablets leading the voice AI-capable device market.



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While a variety of popular apps such as Apple Siri, Google Now, Amazon Alexa and Microsoft Cortana promise to enhance people's lifestyles, few will have more impact on consumer behaviour than personal finance assistants.



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Artificial intelligence (AI)-enabled apps that automate saving, spending and investing promise to streamline users' budgeting and optimise financial management at a touch of a button, or a single (voice) command.

Robo-advisors such as OptioAI and Finie can instantly determine whether the clothing budget for the month has been exceeded, how much has been spent on fuel, how many more times the family can eat at a restaurant or how much extra money is available for investing, with some even offering investment advice.

They integrate various banking, retail and insurance accounts on a single interface, as well as the aggregation of the cheapest personal and business loans available in the market in real time.

In the future, a typical conversation with these robo-advisors or chatbots could sound like: *“App X, what is the best school for my child?”*

In microseconds the app will calculate how much income is expected in the foreseeable future and current spending patterns relative to investment goals and will produce a list of the best options within a clearly defined cost range. Each will be ranked according to any variety of preferred criteria, such as proximity to work/home, academic/sports programmes, religious affiliation and others. Adjustments on one element would instantaneously affect another, constantly providing feedback on as small a detail as which breakfast cereal to switch to.

## Machine learning

Machine learning is described as a method of data analysis that automates analytical model building – software that self-programmes based on real life data, without being explicitly programmed by humans.



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While most digital assistants today are reactive, responding to input cues, assistants of the future will be able to anticipate needs and offer suggested options.

This reality is not too far off, but as with any new technology there are some kinks that need to be ironed out before AI's are as pervasive as their makers would like them to be.

## Risky territory

In a world increasingly under threat from malware, submitting one's most personal financial information can seem like a big ask, and app developers need to do a lot of work in proving that they are indeed the real owners of trustworthy, secure platforms.

## The dark side of AI

Machine learning means smart tools become smarter over time, with the ability to programme and update themselves and offering more precise information and recommendations.

This is becoming a powerful asset in a variety of industries, but a rising fear is that the technology can now being deployed by criminals in relentless, malicious attacks. The theory is that “smart viruses” will be able to adapt quickly to bypass each new iteration of security software.

While this is a scary thought, the reality is that any form of AI requires massive computing resources to be effective and viruses, by nature, need to be small and nimble enough to enter systems without detection. A robust enterprise-wide anti-virus system will detect even the smartest virus.

## Fake apps

The old “phishing” trick of using fraudulent email communications to gain sensitive customer information, such as pin codes and usernames, isn’t going anywhere. In fact, it is only set to expand further in older and emerging technologies such as mobile apps.



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Criminals continue to innovate right alongside the legitimate developers and a range of fake apps is infiltrating the market, with remarkably similar design and user experience to the originals.

## The solution

Financial services institutions in South Africa boast highly secure apps, using various antivirus programmes, automatic sign-out features and device verification software (in case of SIM card fraud).

However, consumers should protect themselves by avoiding downloading apps from pop-up messages and by going to trusted download app stores instead.

Most app developers dedicate significant resources on security, but the wise consumer will check the developer’s security policy for added comfort.

Ultimately, while personal finance apps can offer incredible insights and reveal hidden drains on spending, there is no replacing good old-fashioned budgeting using a piece of paper and a calculator – and then sticking to the plan! Technology should be used as a supplement rather than a substitute.

## ABOUT BRADLEY ELLIOTT

- Bradley Elliott is the managing director at digital customer experience specialists, Platinum Seed.
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