SMARter Machines:
Better Cash App Accuracy Using AI and Robotics
Do You Use Artificial Intelligence?

- Do you use Siri, Google, Cortana, or Alexa to get information?
- Do you get Spotify recommendations based on the music you listen to?
- Did Facebook ask you to tag your friends in your photos?
- Does your smart thermostat keep your house comfortable automatically?

If you answered yes to any of these, you’ve used some form of artificial intelligence.

In movies and books, AI takes the form of robots that want to enslave the human race. In real-life, technology inspired by creative authors and movie makers is being used to help businesses automate processes, increase customer satisfaction, and make smarter decisions.

Every business should be using the smart technology that Apple, Facebook, and Spotify use. If you haven’t brought automation technology into your business, there’s a huge opportunity for you to increase efficiency and accuracy within your organization while providing a better customer experience.

Before you bring R2-D2 and C-3PO to handle your accounting, let’s first understand what artificial intelligence really means.
AI Terminology

What do we really mean when we talk about artificial intelligence? Here are a few definitions to help us get the conversation started:

- **Robot** is a mechanical or virtual machine that is guided by a computer program to follow a specific program. It is typically used for repetitive tasks.

- **Artificial Intelligence (AI)** mimics human decision-making. Computers using AI can be programmed to identify nuances and variations through real-life interactions and produce different, but more accurate results. Visual perception, speech recognition, translation and other tasks requiring human intelligence fall under AI.

- **Supervised Machine-learning (SML)** is the ability of software programs to adapt and learn from the input data and the environment using AI, as well as user feedback. A supervised machine-learning program needs to go through a learning phase before it can make intelligent decisions on data that it has not seen before.

- **Robotic Process Automation (RPA)** is the use of technology that allows employees in a company to configure computer software or a “robot” to capture and interpret existing applications for processing a transaction, manipulating data, triggering responses and communicating with other digital systems.

Now let’s learn how using these technologies can help businesses streamline back-end processes for a better customer experience.
Our Favorite Smart Apps

If we put on our 3-D glasses, we can look inside a few of our favorite apps to see how machine-learning and robotics make them better:

**Siri**

Virtual assistants such as Siri, Alexa and Cortana enhance our cell phones, computers, and our living rooms creating a responsive environment that can read you the news, order you a pizza, even tell you a joke. The more we trust this technology and use it, the better it gets at predicting what we want before we ask for it.

Instead of being programmed, Siri is “trained” by designers through an iterative process of providing positive and negative feedback on the results they give. It also uses speech recognition and natural language understanding, two separate but related technologies that are crucial for virtual assistants that can help us in real-time.
Spotify
How does Spotify introduce you to next favorite artist? Spotify uses deep learning—a technique for recognizing patterns in enormous amounts of data, with powerful computers that are “trained” by humans.

Spotify creates a profile of each user’s individualized taste in music, grouped into clusters of artists and micro-genres—not just “rock” and “rap” but fine-grained distinctions like “synthpop” and “southern soul.” Then Spotify builds connections between the data from two billion customer playlists and your personal taste profile using algorithms. Real-time data processing and collaborative filtering allows it to make smarter recommendations and provide a better user experience.

Facebook
Facial recognition technology allows Facebook’s algorithms to recognize your friends’ faces in your images. It only takes a few photos for Facebook to create a “template” or a unique number based on someone’s facial features, like the distance between the eyes, nose and ears, using the algorithm. This template is based on your profile pictures and photos you’ve been tagged in. Facebook uses these templates to help you tag photos by suggesting tags of your friends, and it can recognize faces with 98% accuracy, the same rate as humans.
It’s Time For Smarter AR Technology

Now that we understand how learning software and robotics can help make our lives more fun, let’s learn how we can apply this technology in a business setting.

Processing Accounts Receivables - The Old Way
Traditionally, AR teams handle invoicing and payments as a series of separate tasks:

- Print invoices, stuff them into envelopes, and mail them to “paper” customers
- Email invoices to any customers willing to get them electronically
- Open envelopes and deposit checks that trickle in. Watch out for paper cuts!
- Collect lockbox, credit card, and ACH payments
- Manually match payments with open invoices
- Answer the phone calls with customer queries and issues
- Resend lost invoices and track down misapplied payments

Payment Cycle Management
Today, smart technology can help you automate these tasks and integrate them into a single workflow process.
Payment cycle management is a new approach which allows organizations to save time, money and resources by automating each step of the process using a single software solution. Data is sent from your ERP to the system which sends invoices automatically using multiple methods. The system accepts payments through multiple channels, applies them to the right invoices, and sends updated account data back to your ERP without human intervention. There’s no reason to use disparate systems and manual processes when software can quickly and accurately do these tasks for you.

**AI is the Cornerstone of Billtrust Automation Technology**

In today’s world of automation, your customers don’t always pay the exact same way each time, and there is still a lot of guesswork. You need a way to blend automation with the ability to give users transparency and control to make decisions when they need to.

Billtrust uses a hybrid approach of Robotics Process Automation (RPA), Supervised Machine-Learning (SML) and statistical analysis to power our Quantum Invoicing, Quantum Payments, and Quantum Cash Application technologies.

“...The days of manual ledger entries, double entry books, shoe-boxes and color-coded folders are behind us. Software robots will help take over simple and complex functions, including file transfers, OCR, and data validation.”

Farhad Khalafi
Billtrust Data Scientist
When Data Isn’t Enough

What makes Apple, Spotify, and Facebook stand out? They didn’t trail behind their competitors with copycat features. Instead, they invested time and money in developing their own cutting edge, smart algorithms. These companies all stand as leaders in their respective fields, and their products have become the gold standards by which all others are compared.

Billtrust has been the innovator in payment cycle management solutions for 15 years. We’ve always looked for new ways to use technology to automate processes, speed up cash flow, and increase efficiency. When we realized that data alone wasn’t going to be enough to solve the most difficult invoice-to-cash process challenges, we leveraged our data scientist to help our engineers integrate robotics and supervised-machine learning technology into our world-class AR solutions.

Robotics and machine-learning serve two different functions. Robots automate mundane, repetitive, and potentially tedious manual processes. Machine-learning accommodates changes in input and business environment and supports value judgments. Both of these are important for decision making and operational automation.

Farhad Khalafi
Billtrust Data Scientist
Building a Smarter Cash App Solution

We’ve explored and tested all of the options and discovered that the most accurate method for cash application automation today is a hybrid approach which uses supervised machine-learning and robotics.

When you first sign up for a Spotify account, it doesn’t know what type of music you like. It learns what you like and gets more accurate the more you listen.

Billtrust uses the same adaptive algorithms to identify data patterns accurately. Our cash application software “learns” the more it works. As it is exposed to more remit statements and payments, Quantum Cash App improves its predictive performance, resulting in higher auto match and accuracy rates.

Supervised machine-learning allows us to automate more than 90% of the manual, repetitive tasks so you can focus on the few exceptions that need human analysis. When you implement Quantum Cash App, your entire team becomes more efficient and can focus on strategic initiatives as you increase the speed of cash flow back into your business.
Building a Smarter Cash App Solution

Accuracy That Can’t Be Matched By Humans
Not only is Quantum Cash App faster than manual processing, it’s also more accurate thanks to auto-correlation technology that can scan emails, invoices, and remit statements for specific keywords, tokens, dollar amounts and other data for faster, more accurate matching. As Quantum Cash App finds each piece of data, it’s given a confidence score. You can teach the system to identify higher confidence rates and teach it how to handle exceptions. Quantum Cash App learns from your decisions and will adapt to create higher confidence scores for greater accuracy and speed.
Billtrust Cash App Solutions

How has Billtrust changed the way businesses process payments? Through creative software innovations like these which accelerate the entire invoice-to-cash process.

Our Quantum Cash Application automates the process of applying payments from multiple sources quickly and accurately to reduce DSO and accelerate cash flow. Using our hybrid supervised machine-learning (SML) and robotic process automation (RPA) technology, Quantum Cash Application can extract transactional data from any source and intelligently matches it to existing open receivables, correcting any exceptions, and producing the highest match rates available.

Smart Capture
Smart Capture utilizes Quantum Cash Application’s proprietary algorithms based on statistical analysis, document layout detection, pattern matching, and supervised machine-learning.

Similar to Facebook’s facial recognition tool, this sophisticated software can look at an image of a remittance and accurately match to an open invoice without any human intervention. Exceptions are identified by the software are presented to a user for approval and learns for improved accuracy over time.
Billtrust Cash App Solutions

Deduction Mapping
Customers regularly pay an amount less than the actual invoice was billed for without explanation and these short payments can cause problems for AR teams and have a negative effect on a client’s cash flow. The deduction codes used by customers often don’t match codes in their ERP, resulting in more manual work and additional delays.

With Deduction Mapping, Billtrust clients can have their customers’ deductions automatically map to their codes using supervised machine-learning. The software is able to identify patterns in behavior or data that is coming in. Our clients have the ability to intervene and make decisions which teach the software what to do for next time. This is especially important to companies which do business with retail and big-box customers.
Billtrust Quantum: The Smart Solution

Quantum Cash App automates one part of your invoice-to-cash process. With an end-to-end payment cycle management solution, you can automate all of your AR processes.

At Billtrust, we’ve developed cloud-based AR solutions to give your accounts receivable team the power and flexibility to accelerate cash flow, improve operational efficiencies, reduce DSO and gain transparency into your invoice-to-cash process.

When you automate your AR processes with Billtrust Quantum, you get to use the latest supervised machine-learning technology to help you process invoices, accept payments, and apply cash faster. Best of all, your Quantum Payment Cycle Management solution integrates with any ERP and can be implemented with minimal IT support.

We also offer additional services to enhance your solution, as well as a Managed eAdoption Program to help you transition customers to electronic invoicing and payment.

Grow your business without limits! With Billtrust you can reduce AR costs overall by up to 35% or more using the solution that’s right for your organization.
To learn how the supervised machine-learning technology in Billtrust Quantum Cash Application can help your business, contact a Billtrust Solutions Consultant at:

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or

1-888-580-2455

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