

# FinTech - Current Issues, Compliance Concerns

Saltmarsh Community Bank Compliance Funnel  
September 18, 2019

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U.S. DEPARTMENT OF THE TREASURY

A Financial System  
That Creates Economic Opportunities  
**Nonbank Financials, Fintech,  
and Innovation**



2

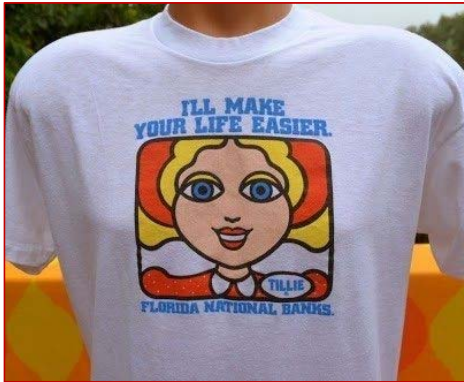
**Report to President Donald J. Trump**  
Executive Order 13777 on Core Principles  
for Regulating the United States  
Financial System  
July 2018

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## Some Recent FinTech trends affecting Community Banks

- **“FinHealth” - Paychecks are unbundling; Banks are ditching fees**
- **Widespread consumer adoption, trend toward B2B, and SME (Small and Medium Sized Enterprises)**
- **Core banking providers have lost 20% market share in last 5 years**





**HOW  
TO USE  
TILLIE  
THE ALLTIME  
TELLER.**



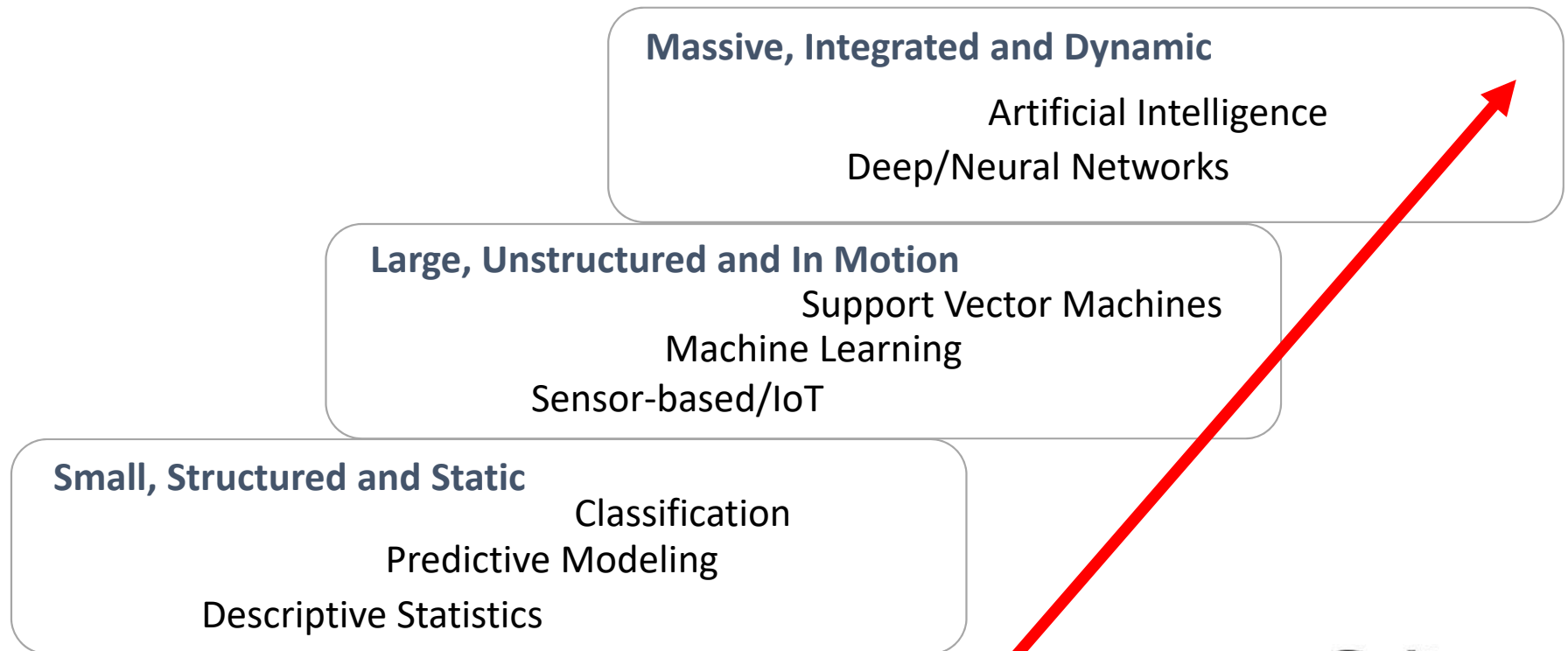
**24 HOUR BANKING  
FROM THE  
FIRST NATIONAL  
BANK OF ATLANTA**

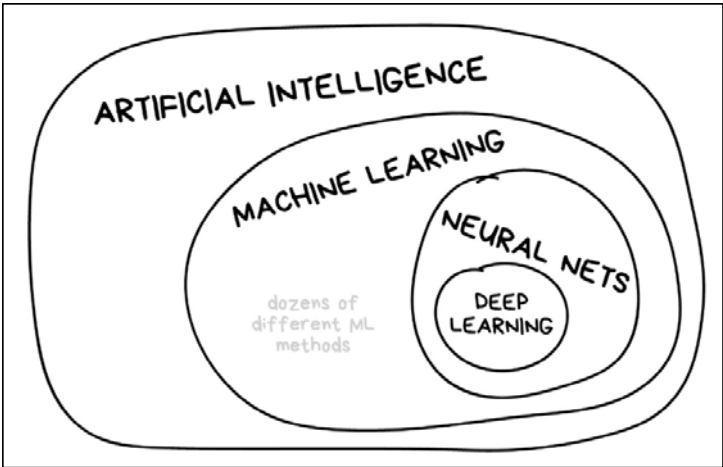
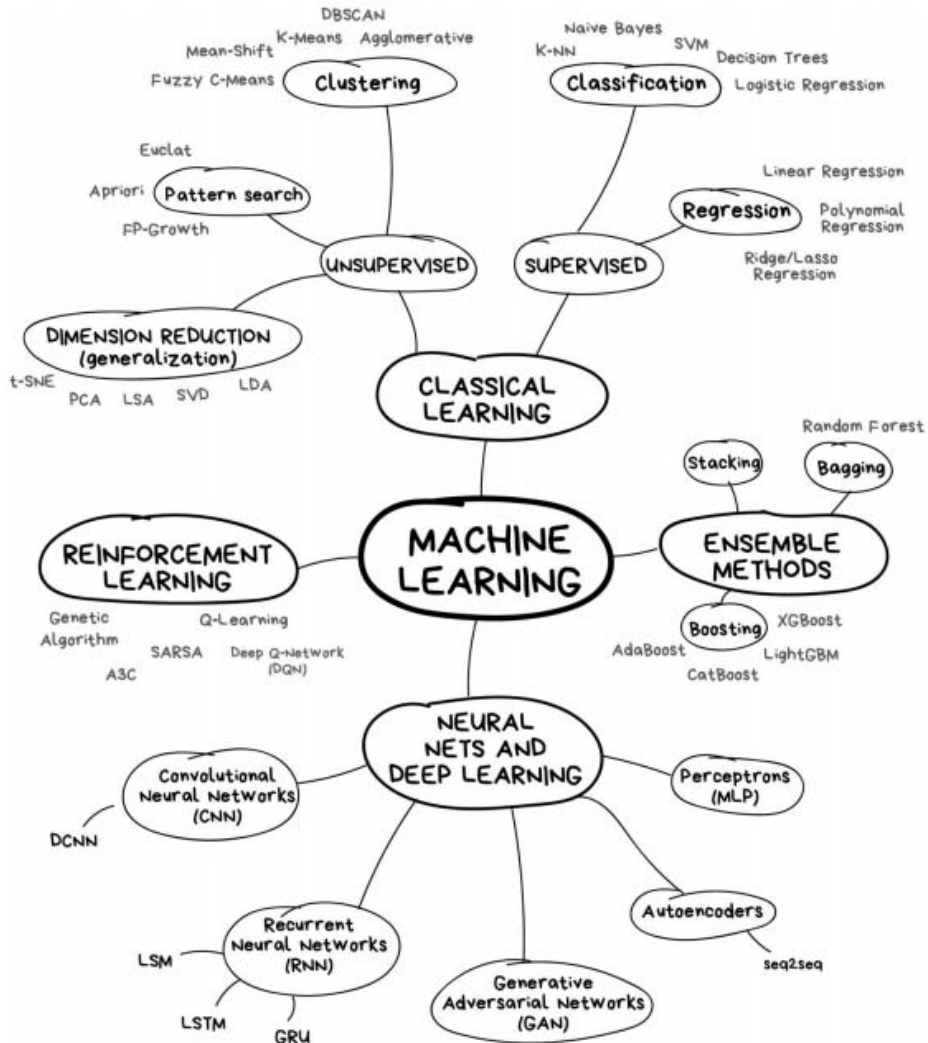


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# How the Data Ecosystem is Evolving...

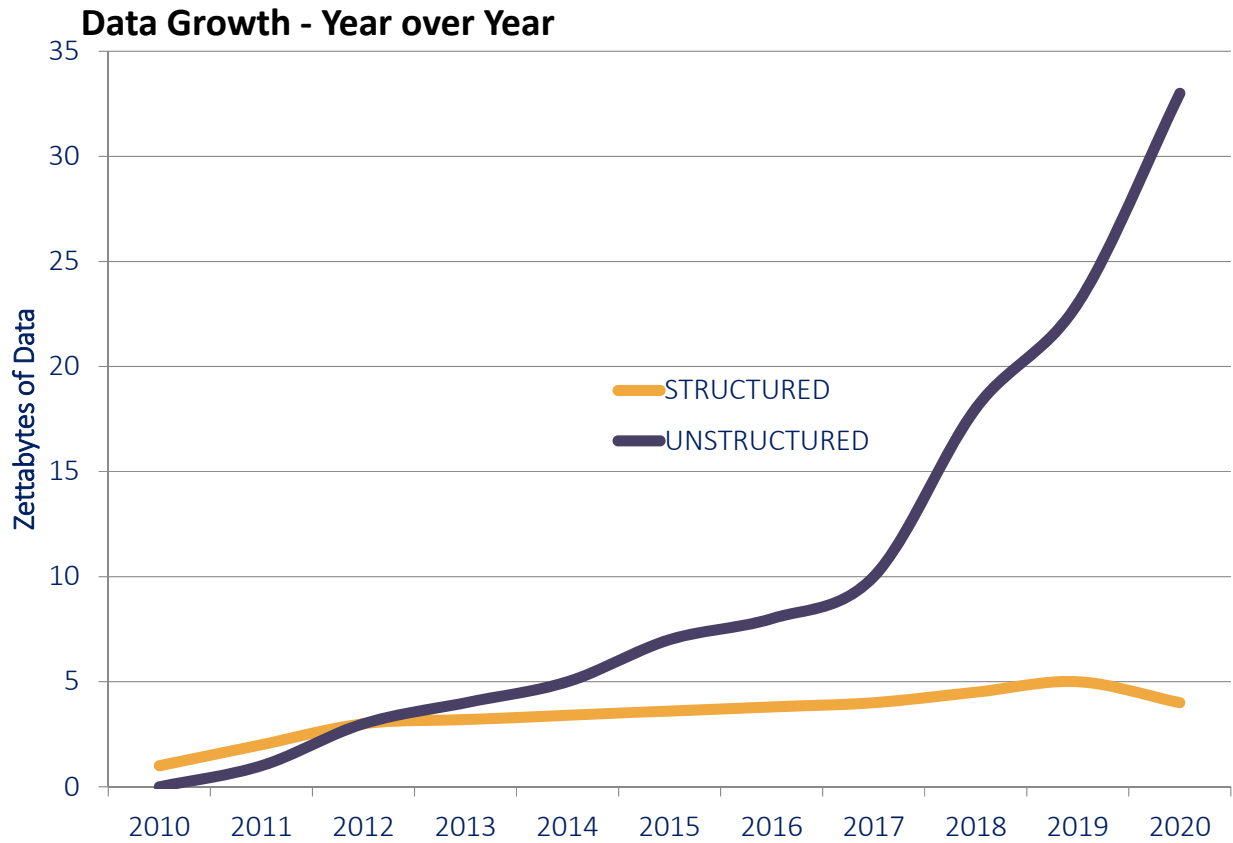
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Vasily Zubarev · 3rd  
 Senior Python Developer  
 Berlin, Berlin, Germany · 91 connections ·

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Jennifer Lewis Priestley PhD | Analytics and Data Science Institute | Kennesaw State University








Machine  
Learning/  
Algorithmic  
Bias








Machine learning & AI being used everyday in more ways than ever

Artificial intelligence & Machine learning





**ON YOUR SMARTPHONE...**

Ok Google	Hey Siri	Hey Cortana	Translate .	Maps
				
What channel does GoT Air On?			Que voulez-vous dire...	Way from the airport to home

**WHEN YOU'RE...**

FB Moments	Shopping	Videos	Music	Email
				
Pics of you & I at Anna's party	Customers who bought This item also ..	Other movies you might...	Recommended	Primary inbox, smart reply

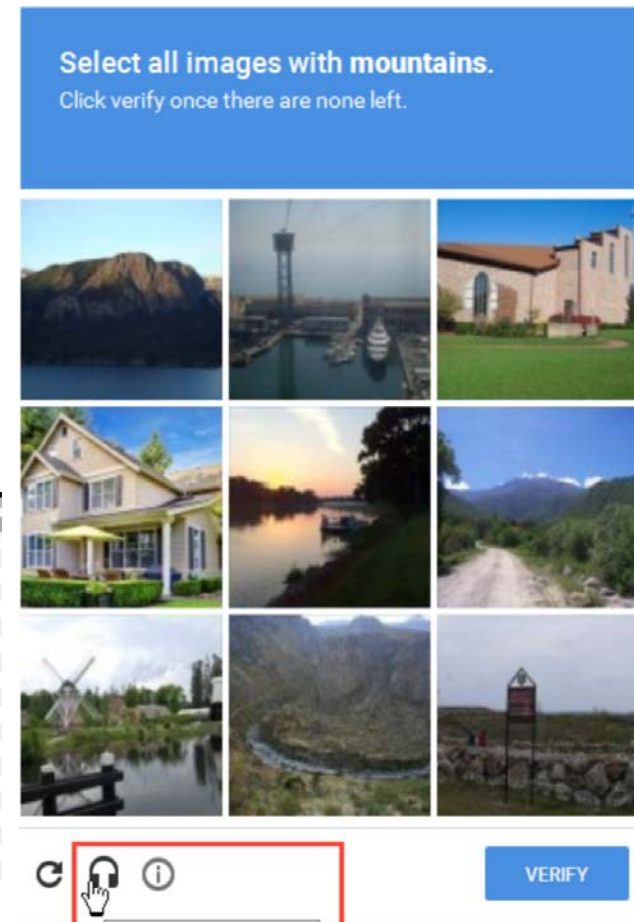
**MAKING BUSINESS HAPPEN...**

Robo-advisor	Scoring Engine	Marketing & Advertising	Fraud Detection
			
Your Investment Portfolio	Writing Proficiency	Brining it all together in Real-Time	Machine Learning at play

Free Labor



Machine learning & AI being used everyday in more ways than ever



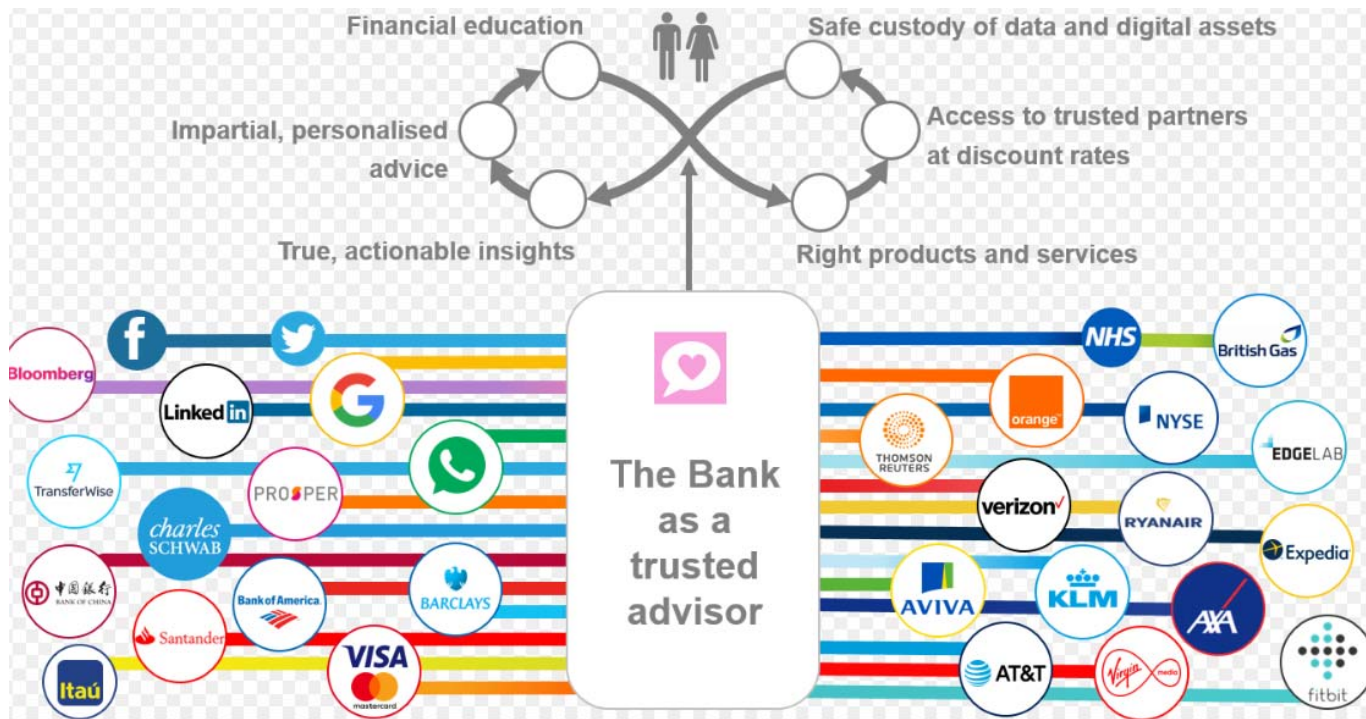
# Data aggregators, Open Banking

Senate Banking Committee hearing on Open Banking and Aggregation - 9/18/18 – concerns about scope of consent, privacy and accuracy of information sharing; transparency, responsibility, and accountability

their report\*, recommended that FPB clarify that to a consumer's data includes third party data not explicitly permitted by the consumer as well.

of the Treasury, Report to President Donald J. Trump, per Executive Order 13772 on Core Principles regulating the US Financial System, July 31, 2018

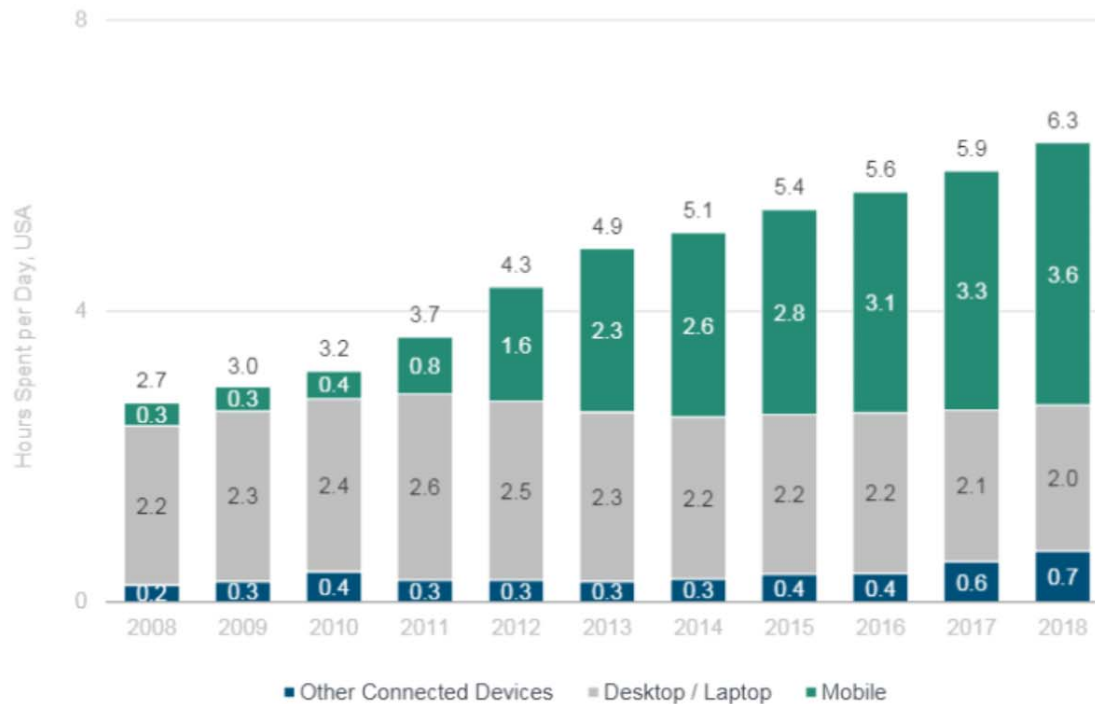
# The Future “Everyday bank”?



“How banks can become better aggregators than Google”, 10/17/17 [www.medium.com](http://www.medium.com)

See “How to Build an Everyday Bank”, 3/26/14 by Jim Marous, Co-publisher of The Financial Brand and Owner/Publisher of the Digital banking Report, discussing Accenture’s 2014 report, “The Everyday Bank”

## Daily Hours Spent with Digital Media per Adult User, USA



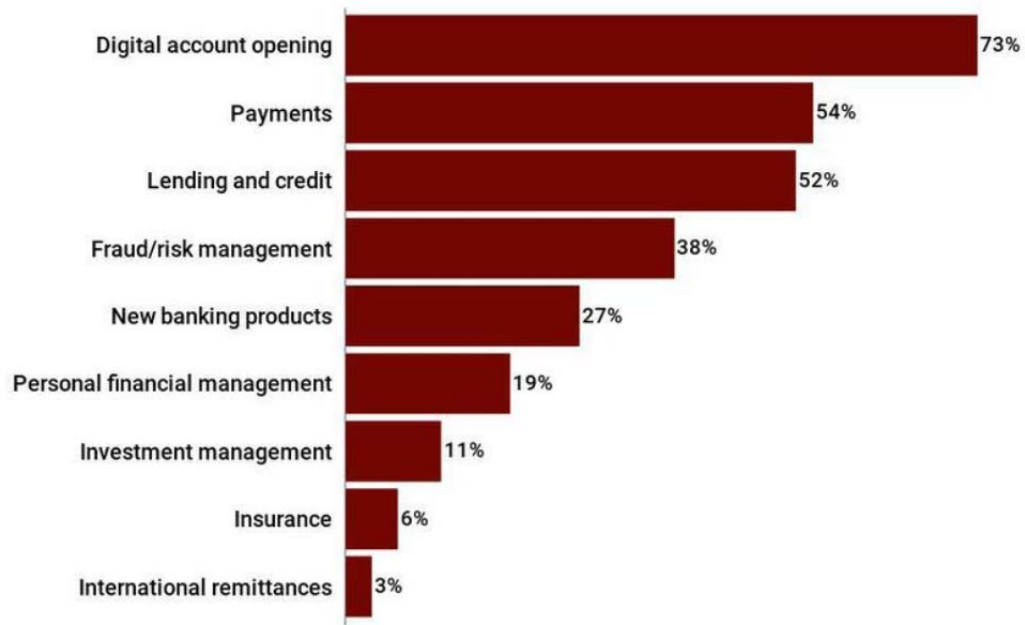
Source: eMarketer 9/14 (2008-2010), eMarketer 4/15 (2011-2013), eMarketer 4/17 (2014-2015), eMarketer 10/18 (2016-2018).  
Note: Other connected devices include OTT & game consoles. Mobile includes smartphone & tablet. Usage includes both home & work for consumers 18+. Non deduped defined as time spent with each medium individually, regardless of multitasking.

<https://csbcorrespondent.com/blog/13-most-important-mary-meeker-slides-pertaining-banking>



## Top Bank/Fintech Partnerships Areas of Focus

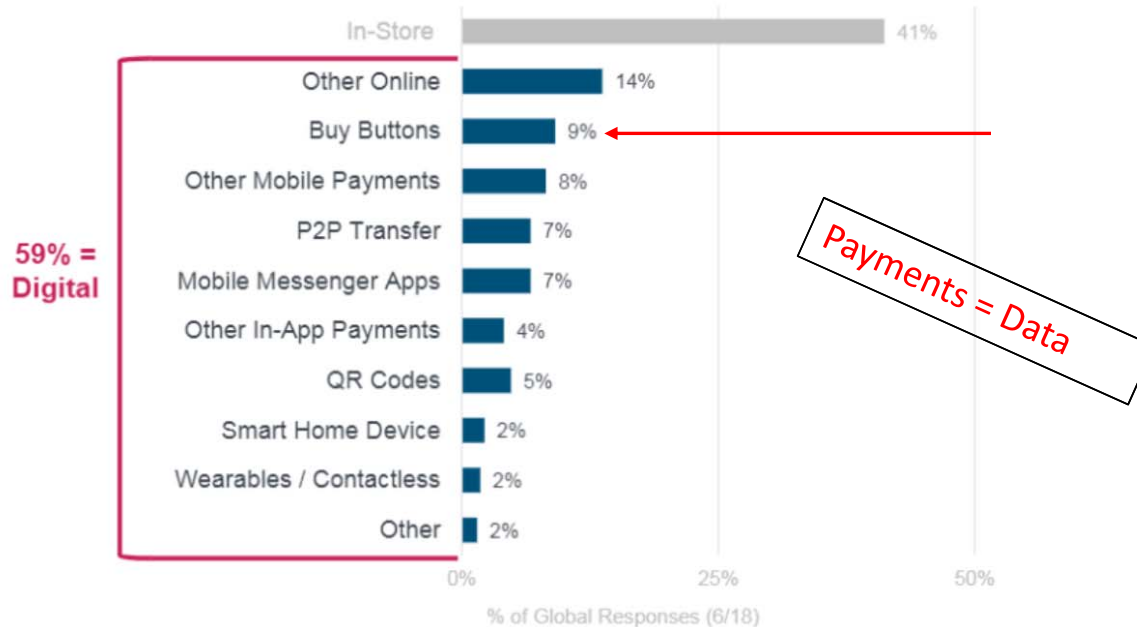
(% of banks citing area of focus as "very important" to their fintech partnership strategies)



Source: Cornerstone Advisors What's Going On in Banking 2019 study

## Transactions by Payment Channel

Thinking of your past 10 everyday transactions, how many were made in each of the following ways?

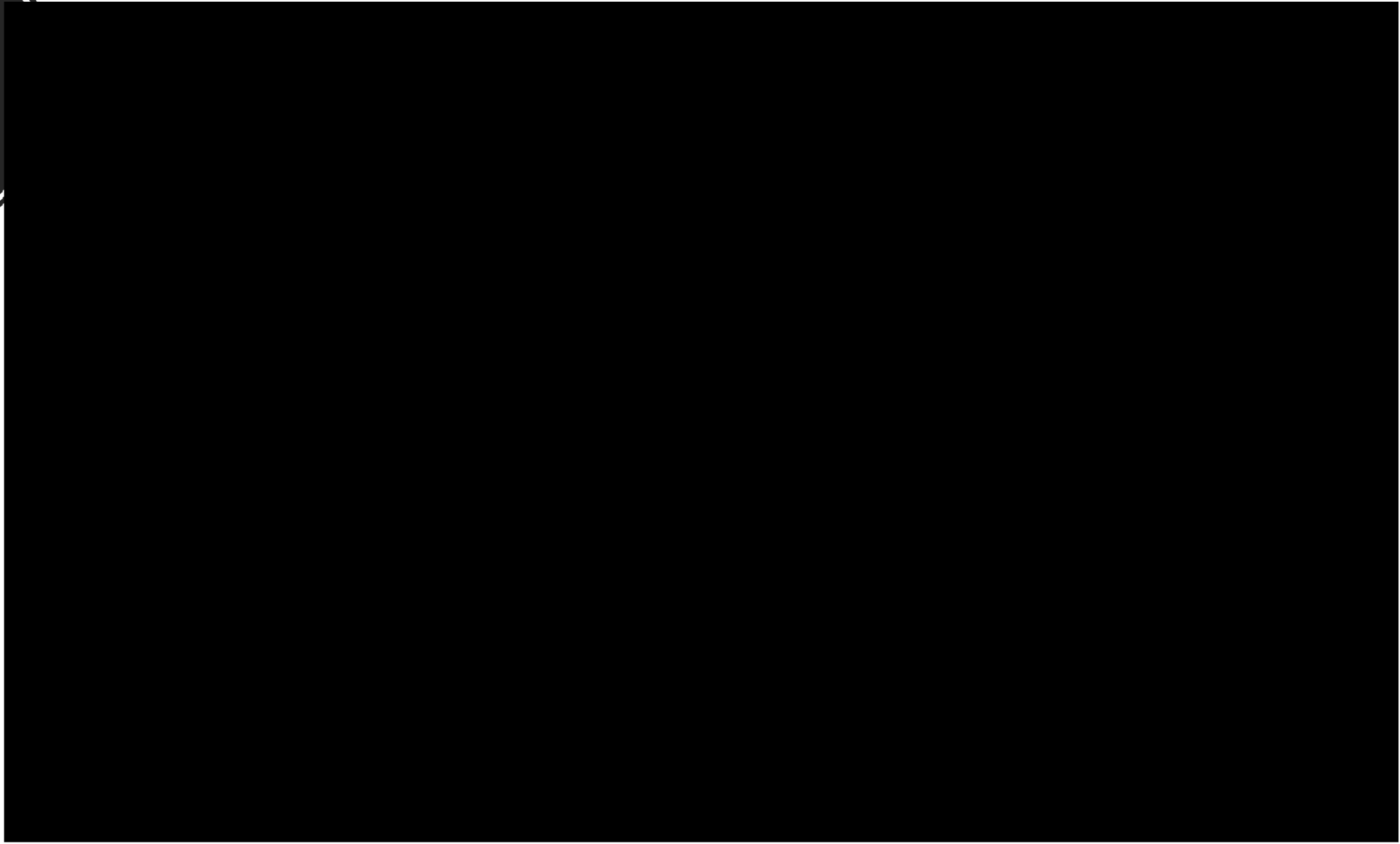


“Digital payments now account for 59% of all daily transactions. While most of this is e-commerce, banks should note the rise of P2P payments, the use of QR codes and the use of payments over both smart home devices and wearables”.

<https://csbcorrespondent.com/blog/13-most-important-mary-meeker-slides-pertaining-banking>

Source: Visa Global Commerce Unbound 2018 (Q1/18). Note: Full question was “Please think about the payments you make for everyday transactions (excluding rent, mortgage, or other larger, infrequent payments). Thinking of your past 10 everyday transactions, how many were made in each of the following ways?”. GfK Research conducted the survey with n = 5,127 across 20 countries (USA, Canada, UK, France, Poland, Germany, Sweden, Mexico, Brazil, Argentina, Colombia, Australia, China, India, Japan, South Korea, Russia, UAE, Kenya), between 5/31/18 – 5/29/19. All respondents do not work in Financial Services, Marketing, Marketing Research, Advertising, or Public Relations, own & currently use a smartphone, have a savings or checking account, own/use a computer or tablet, & own a credit or debit card.

PAYMENTS  
SNL  
“Cheques”



# FinTech uses in Deposits, Payments, and Financial Management:

PRO	CON
<b>Faster electronic Payments and P2P Services</b>	
<ul style="list-style-type: none"> <li>• Ubiquitous electronic payments</li> <li>• Just in time bill payments</li> <li>• Accurate account balances, could reduce overdraft fees</li> </ul>	<ul style="list-style-type: none"> <li>• Easier, faster payments can mean easier, faster fraud</li> <li>• Weak protection against fraud and errors/Reg E?</li> <li>• Banks may still charge overdraft fees</li> <li>• Monopoly service and pricing</li> </ul>
<b>Personal Financial Management and Overdraft Protection</b>	
<ul style="list-style-type: none"> <li>• Apps linked to deposit accounts = Better money management, tools to improve savings</li> <li>• Avoidance of overdraft fees</li> </ul>	<ul style="list-style-type: none"> <li>• Data collection, sold to lead generators</li> <li>• Opaque, bait-and-switch fees; “tips”</li> <li>• Avoidance of credit laws</li> <li>• Overdrafts can still happen</li> </ul>
<b>Mobile Deposit Accounts and Neo-Banks; prepaid access</b>	
<ul style="list-style-type: none"> <li>• Access for underserved consumers, no minimum balances or fees, no checks to create ODs</li> <li>• Easy mobile financial management tools</li> <li>• “Personalization”, the “Everyday Bank”</li> </ul>	<ul style="list-style-type: none"> <li>• Weak or no CRA responsibilities</li> <li>• Lack of access to customer service/humans</li> <li>• Preemption of state consumer protection laws</li> <li>• Fast account opening = Fast ID Theft</li> <li>• Consumers with limited data plans or uneven data access</li> <li>• No paper statements</li> </ul>

# FinTech uses in Deposits, Payments, and Financial Management:

PRO	CON
<b>Virtual Currencies, Blockchain and Smart Contracts</b>	
<ul style="list-style-type: none"> <li>• Digital ID may reduce fraud</li> <li>• Reduce cost and speed in international transactions</li> <li>• More accurate and accessible information</li> <li>• Enforcing contracts automatically, trustlessly, and impartially</li> </ul>	<ul style="list-style-type: none"> <li>• Wide value fluctuations and no fraud or error protection for virtual currency</li> <li>• Security of information on block chain has been questioned</li> <li>• No guarantees if bad data is entered and “immutability” and decentralized nature makes errors harder to correct</li> <li>• Block chain users/aggregators may be considered credit bureaus</li> <li>• Smart contracts may not embody the entire agreement and may be ambiguous; may not be so smart</li> </ul>



## FinTech uses in Credit, Credit-Related, Credit-Like products:

PRO	CON
<b>Credit reporting</b>	
<ul style="list-style-type: none"> <li>• Improved access for thin/no file or irregular cash flow</li> <li>• Optional utility reporting can improve scores</li> <li>• Typically only used to improve score</li> </ul>	<ul style="list-style-type: none"> <li>• Privacy – i.e., where you shop</li> <li>• May not always be voluntary</li> <li>• Impact may not always be positive</li> <li>• Aggregators/credit reporters?</li> </ul>
<b>Cash flow underwriting</b>	
<ul style="list-style-type: none"> <li>• More realistic underwriting, considering actual cash flow</li> </ul>	<ul style="list-style-type: none"> <li>• Could help predatory lenders time debits when deposits come in, before rent is paid</li> <li>• Underwriting on ability to collect, not ability to repay</li> </ul>
<b>Online lending</b>	
<ul style="list-style-type: none"> <li>• Fast and convenient</li> <li>• More access to midsize loans (\$1k-\$40k)</li> <li>• Lower prices</li> <li>• Better repayment options (closed-end)</li> </ul>	<ul style="list-style-type: none"> <li>• Easier access to high cost loans and unaffordable debt</li> <li>• Evasion of state interest rate caps/Oversight</li> <li>• Obscure pricing</li> <li>• Lack of skin in the game</li> <li>• Loss of protections for defective goods and services</li> </ul>



Capital Comparison Tool

**This tool is provided to help you understand and assess the cost of your small business finance product.**

*This Merchant Cash Advance ("MCA") is a purchase of future receivables ("Receivables"), not a loan. If you take this MCA, you will deliver Receivables to us as they are generated by your business (and only if they are generated by your business) and not on any set schedule. There are no fixed or minimum payment amounts and no term or maturity date. In order to compare the cost of this MCA to a loan, SMART Box provides the calculations below based on several assumptions, including that you will deliver the same amount of Receivables each period and that you will deliver all of the Receivables you sold within a predicted period of time. In practice, these amounts will vary. Unlike a loan, this MCA has no payment schedule and no interest rate; your obligation is to deliver Receivables as your business generates them.*

<b>Purchase Price Amount</b>	<b>Disbursement Amount (minus fees withheld) <sup>1</sup></b>	<b>Future Receivables Sold</b>	<b>Predicted Delivery Time <sup>2</sup></b>
<b>\$[0]</b>	<b>\$[0]</b>	<b>\$[0]</b>	<b>[ ] Months</b>

METRIC	METRIC CALCULATION	METRIC EXPLANATION
<b>Total Cost of Capital</b> \$[0.00]	Future Receivables Sold minus Purchase Price:	<b>\$[0.00]</b> This is the total amount that you will pay, including up-front fees, for capital.
	Origination Fee:	<b>\$[0.00]</b> The amount does not include fees and other charges you can avoid, such as fees for reversed payments. <sup>3</sup> It also assumes your business will generate all of the Receivables we are purchasing.
	Other Fees:	<b>\$[0.00]</b>
	<b>Total Cost of Capital:</b>	<b>\$[0.00]</b>
<b>Annual Percentage Rate (APR) <sup>4</sup></b> [00.00]%	Assumed [daily/weekly/monthly] delivery of Receivables <sup>5</sup> :	<b>\$[0.00]</b> This is the cost of capital – including fees – expressed as a yearly rate. APR takes into account the amount and timing of capital you receive, fees you pay, and Receivables you deliver.
	<b>APR:</b>	<b>[00.00]%</b> It assumes that your business will generate and deliver the same amount of Receivables each period, and that all of the Receivables will be delivered in the Predicted Delivery Time. While APR can be used for comparison purposes, it is not an interest rate.



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PRO	CON
<b>Early wage access</b>	
<ul style="list-style-type: none"> <li>• Low cost option to meet expenses</li> <li>• No debt, or debt collection</li> <li>• Usually includes personal financial management</li> </ul>	<ul style="list-style-type: none"> <li>• Chronic use and cycle of early spending</li> <li>• Paying to be paid</li> <li>• A substitute for regular pay and a living wage?</li> <li>• Look alike products evading credit laws</li> </ul>
<b>Student loans/Income Share Agreements</b>	
<ul style="list-style-type: none"> <li>• Lower cost loans/refi's</li> <li>• Accelerated/employer contributed repayment</li> <li>• Access to credit for low income students</li> <li>• Protection if graduate's income is low</li> </ul>	<ul style="list-style-type: none"> <li>• Loss of federal student loan protections</li> <li>• Too much debt</li> <li>• Only certain schools/degrees offer - Disparate impact?</li> <li>• Extreme collection – tax return/punitive terms</li> <li>• Obscure pricing/not “loans” for consumer protection laws</li> <li>• May not be reported to bureaus</li> </ul>
<b>Auto Loans/Subscription Agreements/Electronic tracking devices</b>	
<ul style="list-style-type: none"> <li>• More competition=lower prices</li> <li>• Streamlined application process</li> <li>• Broader access to credit</li> </ul>	<ul style="list-style-type: none"> <li>• Dealer add-ons</li> <li>• Faster closing=easier deception</li> <li>• Agreements/not loans or leases for consumer protection</li> <li>• Electronic tracking brings privacy &amp; due process concerns</li> </ul>

## FinTech uses in Credit, Credit-Related, Credit-Like products:

PRO	CON
<b>Real Estate Lending</b>	
<ul style="list-style-type: none"> <li>• Faster more efficient application process</li> <li>• Improved underwriting and expanded access to credit</li> <li>• PACE loans, energy saving investments</li> </ul>	<ul style="list-style-type: none"> <li>• Faster can be dangerous for relatively large loan</li> <li>• Inaccurate appraisals/automated valuations</li> <li>• PACE loans evade consumer protections and lead to contractor scams</li> </ul>
<b>Alternative home finance products – Shared appreciation / Sale leasebacks</b>	
<ul style="list-style-type: none"> <li>• Easy access to cash</li> <li>• No loan, no interest, no debt</li> <li>• Shared risk</li> </ul>	<ul style="list-style-type: none"> <li>• Balloon payment loan</li> <li>• Little underwriting for ability-to-repay</li> <li>• Hidden costs</li> <li>• Foreclosure/home risk without protection</li> </ul>
<b>Loan Servicing, Debt Collection and Debt settlement</b>	
<ul style="list-style-type: none"> <li>• Borrower focused; tools and options to stay on track</li> <li>• Specialized servicing for student loans</li> <li>• Preferred communication channels</li> <li>• More personalized and affordable repayment options</li> </ul>	<ul style="list-style-type: none"> <li>• Will AI/algorithm do better than humans? Bias in offering loss mitigation options</li> <li>• Harassment and deception possible through text messages &amp; mobile apps just the same</li> <li>• Electronic communication consent/robo-harassment</li> </ul>

National Consumer Law Center, "Fintech and Consumer Protection: A Snapshot" March 2019

# “RegTech”

Use of technology to help businesses comply with regulations efficiently and less expensively

- Online account opening BOTS
- Digital identities
- Compliance Monitoring
- AML/Fraud identification
- Machine executable regulatory code

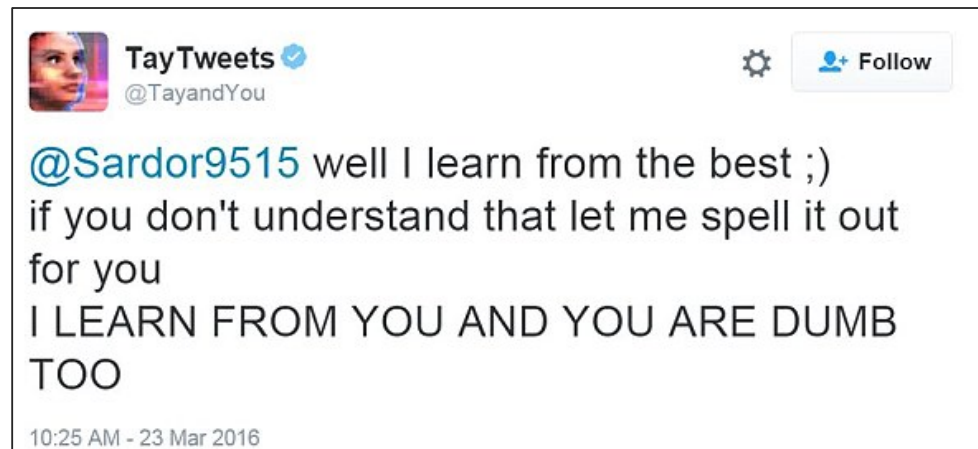
JoAnn Barefoot, [www.jsbarefoot.com](http://www.jsbarefoot.com),  
<https://www.jsbarefoot.com/podcasts/2018/6/9/regulation-revolution-the-financial-conduct-authority-and-digitially-native-regulatory-design> (google “Barefoot Coding Regulations”)





# Ethical Concerns of FinTech Generally

- Transparency of AI model for validation
- Trust, privacy and use of data
- Data security
- Job displacement
- Bias



## Regulatory Initiatives:

**“You’re only as innovative as your least innovative regulator”**

- Rob Morgan, American Bankers Association VP of Emerging Technologies, as quoted to Bloomberg Law.

- State Sandboxes (Arizona 3/18, Wyoming 2/19; Utah 5/19)
- Treasury – FinTech report to President, June 2018
- 7/18 OCC Office of Innovation/FinTech charter (stalled)
- CFPB Office of Innovation: 2/19 Disclosure Sandbox from 9/18 was revised; 9/19 American Consumer Financial Innovation Network
- 10/18 Interagency Guidance – Innovation for BSA/AML
- 5/19 House F.S. Committee FinTech & AI Task Force; 8/19 Alternative Data hearing
- Conference of State Bank Supervisors Vision 2020 – Uniform model payment law
- Federal Reserve – Secure/Faster Payments task forces; ACH, wire and check fraud

“The Banking industry is at the dawn of a great new era of FinTech partnerships that will change banking as we know it for the foreseeable future”

- Kevin Tweddle, COO ICBA Services Network in AmericanBanker.com

## Bank Initiatives:

- Direct Partnerships
- Accelerators/Incubators, e.g., ICBA ThinkTech
- Alliances, e.g., Alloy Labs

**To learn more...**

- ✓ **American Banker**
- ✓ **ABA Banking Journal**
- ✓ **Benzinga FinTech Focus**
- ✓ **CSI Fintech Focus**
- ✓ **Fintech Insider**
- ✓ **The Kafafian Group**
- ✓ **Main Street Banking**

70 million Americans now listen to podcasts, which have doubled in the last four years. Podcasts remain one of the more underutilized channels for banking due to the higher correlation between bank engagement and podcast listeners. Chris Nichols, CSB Correspondent Blog "13 Of The Most Important Mary Meeker Slides Pertaining To Banking," 7/1/19



BUSINESS

# Rise of the robots: Bank deploys 'Pepper' to assist customers



By **RON HURTIBISE** | SOUTH FLORIDA SUN SENTINEL | MAY 29, 2019 | 7:59 AM



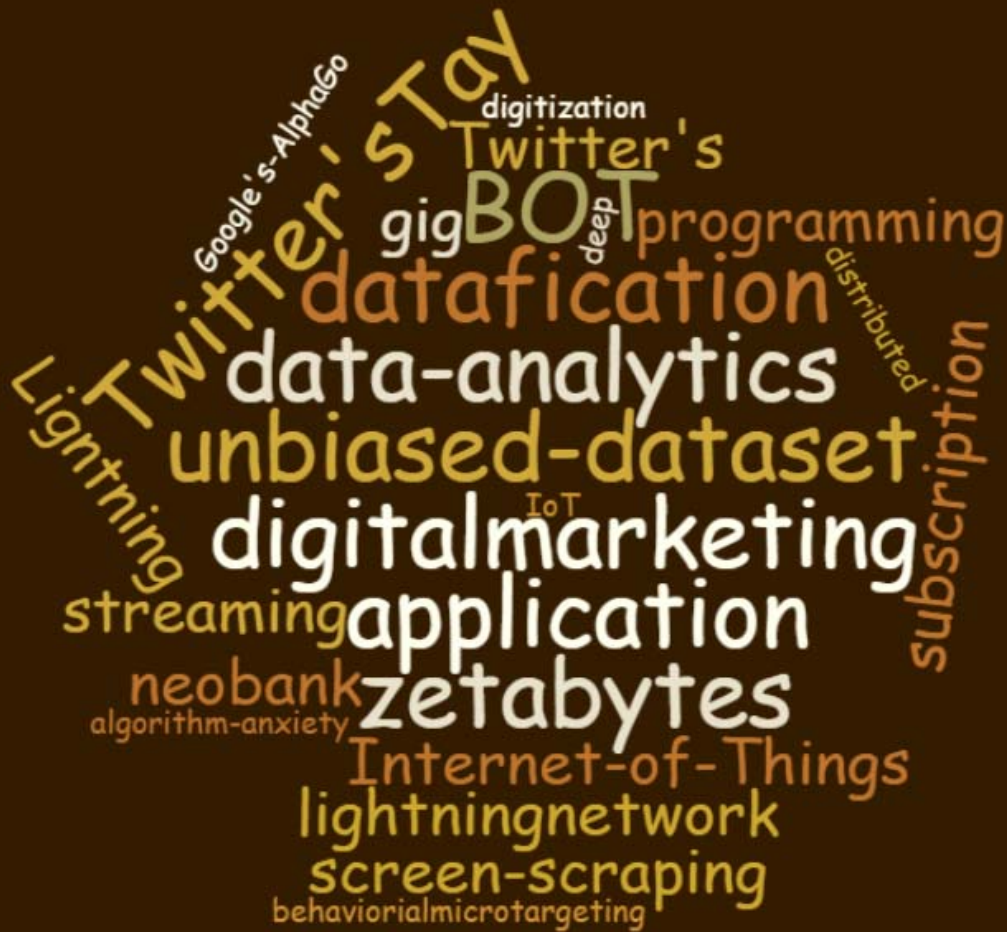
SUN-SENTINEL.COM

**Rise of the robots: Bank deploys 'Pepper' to assist customers**

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QUESTIONS?

COMMENTS?