Automating at the Speed of Business

What's Driving Change?

If you work in technology, disruption and digital transformation are part of your ecosystem. As technologists the TechFabric team has developed a deep understanding of the sources driving this revolution. A significant portion of digital transformation is consumer driven, but an even bigger part is innovation driven. Self-driving cars, voice search, blockchain, precision robotic surgery and manufacturing for that matter -- these and much more are set to be delivered with the coming 5G wireless network.

Some industries are faster than others to adopt new information technology approaches but they all have the opportunity to be part of the boom in new products, new channels, new services, and business models offered through innovations in machine learning and AI combined with 5G.

If you're feeling market pressure for your company to evolve to meet the changing needs of your customers, the best way to address this pressure is to embrace the exciting opportunities associated with these changing times.

An important part of our job at TechFabric as application architects is to stay on top of all of the new and emerging technologies that can give our customers the competitive edge they seek. In virtually all industries and vertical markets, we see greater automation of tasks and digital connectivity as offering huge advantages in application development that leads to higher productivity, lower costs and greater user satisfaction. The potential is incredible.

Technology, particularly machine learning and artificial intelligence allow TechFabric to look at the market and find patterns, discern trends, and then develop products that really move the consumer experience – and the market forward.

Automation accelerates speed.

TechFabric guarantees a safe, smooth digital transformation journey.

If you want your business to move at the speed of technology, your software needs to leverage the latest technologies and embrace efficient processes. Workflow is a key ingredient in the automation challenge; automation by itself doesn't really have meaning since even poorly designed processes can be automated. In that instance, you simply get to a poor user experience that much faster.

TechFabric can spot problem areas and streamline your processes and workflows for maximum efficiency. We do this by taking a holistic approach to design and development, first and foremost starting with the desired outcomes and with these insights consider how each will be managed, monitored and integrated into the rest of processes. This becomes quite important when you're considering how you plan to secure your application, for example.

Cybersecurity is one of the top issues keeping CEO's and CFO's up at night and for good reason; a recent report by Cybersecurity

Ventures indicates that while advances in technology are the main driver for economic growth, they have also led to a higher incidence of cyberattacks. The leading trends such as e-commerce, mobile payments, cloud computing, big data and analytics, IoT, AI, machine learning, and social media, according to the firm, all increase cyber risk for users and businesses.

And yet, artificial intelligence is also creating new opportunities for banks and financial technology firms to access new sources of consumer data for predictive analytics to prevent fraud and reduce delinquent loans. By using Machine Learning and Artificial Intelligence, TechFabric has built predictive models that help mitigate risks and increase the bottom line for lenders. If growth is your objective, select an application development partner committed to security, as well as growth and time to market.

TechFabric Application Development – Remarkable Results

TechFabric has developed many cloud-native applications for our clients including applications for large scale eCommerce, Auction sales, Auto-financing, Refinancing loans, Remarketing, Health Care, and Real Estate. Typically, a company comes to TechFabric, when they are ready to move away from troublesome, largely manual processes.

Customer ROI

One leg of a TechFabric customer implementation in the auto finance space included the creation of a rules-based auto response triggered by lender and rate that automatically responds to a lead, displaying for the customer the rate or loan amount for which they are eligible. The new functionality dramatically improved efficiency for this initial piece of the buyer journey.

Another, also in auto finance involved integration and automation between communication platforms (phone, text, email) directly within the application. For example, if a customer sent a text message with their driver's license number, the system automatically uploaded it to a customer profile. If that customer then emailed a copy of their license and registration, content and images would be parsed out of the email and attachments and automatically saved to their profile. The result was one central profile where many disparate pieces of information aggregated in one central profile vs. multiple locations. A huge time-saver for agent and customer.

For a customer in the enterprise e-commerce space, TechFabric helped streamline their workflow, modernize their systems to increase sales not only through their website that generates hundreds of millions in revenue yearly, but also improving their in-store point of sale systems. Today, not only is the company confident that it knows precisely what is, and is not, in inventory - their customers know as well. They are assured that when they visit the store, their desired item, perhaps found first on the mobile app, will be there, in-store for pickup. This customer reported a 34% Increase in staff productivity in retail storefronts, improvement in customer feedback on social and web channels, better tracking and reporting of product fulfilment and sales and a reduction of inefficiencies in both warehouse and retail operations.

The ROI is simple – by streamlining and automating a majority of processes, you're able to process more loans, sell more merchandise, accelerate deal closings and create happier customers. Perhaps the most important outcome achieved is that by automating processes, TechFabric is able to eliminate human errors that inevitably occur in outdated or manual processes.

Security, Compliance & Microsoft Azure

Whatever industry challenge you are trying to address, be it a lending/refinance, e-Commerce, real estate, healthcare or other (because really, what industry today isn't transactional,) you need an IT partner who can guarantee the kind of security, compliance and risk management all parties demand.

Don't confuse compliance with security – they are far from the same. Numerous enterprises that have achieved "compliance" have still fallen victim to a paralyzing data breach. The result isn't just measurable in fines, increased audits and a diminished brand – but in downtime:

- IDC has calculated that for the Fortune 1000, the average total cost of unplanned application downtime per year is $1.25 billion to $2.5 billion.

- The average hourly cost of an infrastructure failure is $100,000 per hour.

- The average cost of a critical application failure per hour is $500,000 to $1 million

In a recent research report Forrester Research reported that the average ransomware attack lasts 7.3 days.

TechFabric is a Microsoft Gold Partner for Azure with demonstrated capability for building robust, highly secure and scalable applications; paying close attention to help customers meet a wide range of compliance requirements like:

Banking/Financial Services/eCommerce:

- American Institute of Certified Public Accountants (AICPA) SOC1 and SOC2 standards,

- The Payment Card Industry Data Security Standard (PCI DSS) version 3.2

- Federal Financial Institutions Examination Council (FFIEC) and Gramm-Leach-Bliley Act (GLBA).
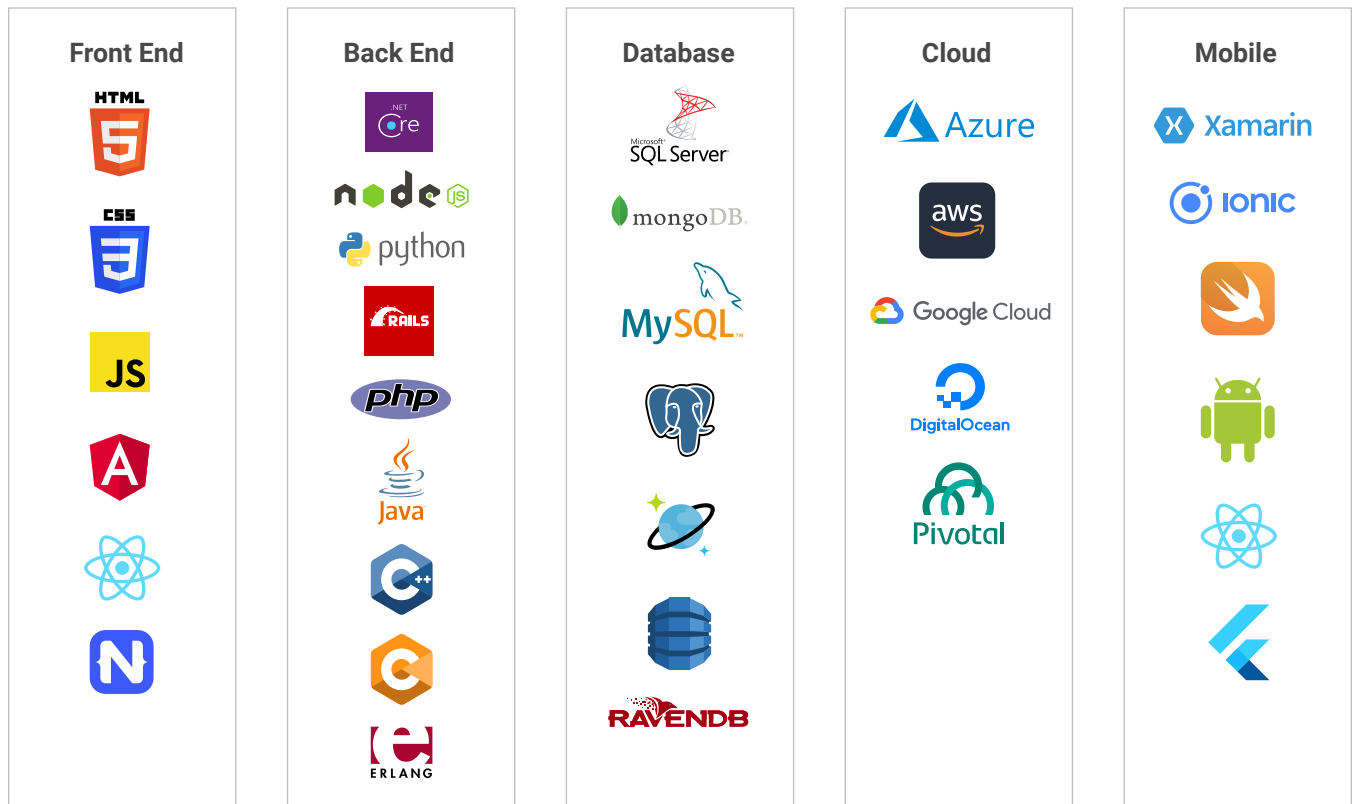
HealthCare

- HIPPA

Without a strategically thorough and active security program, coupled with a solid compliance plan, your organization is open to significant risk for intrusion.

TechFabric Services

Business process automation is at the heart of the TechFabric approach. Our mission is to build systems that automate the business and we accomplish this by building web and mobile applications and related APIs using the most modern, cutting edge technologies and practices. The kinds of efficiencies that we are able to be achieve today with technology are really quite astonishing, this is evident in every solution we build.

TechFabric's Stack

Front End	Back End	Database	Cloud	Mobile

Web Applications

TechFabric has tremendous experience in building web applications with a rich user experience. We have perfected the art of building modern web applications work across all browsers and compatible with secure enterprise environments. With our unmatched expertise and laser focus on JavaScript web app frameworks such as Angular, Vue and React, the TechFabric team can create rich user experiences for your end users. With over 100 successful web applications completed to date, TechFabric is well positioned to deliver on your unique business and industry needs.

Tech Stack: C#, Angular, ReactJS, VueJS, jQuery, .NET Core, Ruby, Java, Python, JavaScript, TypeScript, F#, C, C++, Erlang

Mobile Application Development

As one of North America's leading cross platform mobile app development companies, TechFabric utilizes the latest in mobile development frameworks such as Xamarin, React Native and Native Script to build apps for all mobile platforms including iOS, Android and Windows Universal Apps. We also specialize in building mobile applications using native languages and frameworks such as Swift, Java, and C# for their respective native platforms like iOS, Android and Windows.

Tech Stack: C#, Xamarin, Swift, Java, NativeScript, React Native, Flutter

Event Driven Reactive Microservices & APIs

In addition to helping enterprises of all sizes with their application development needs, be they web or mobile, TechFabric also develops highly robust, secure and scalable APIs using Microservice frameworks. When building line of business applications, UX and responsiveness (speed) has become equally important to having a rich feature set and functionality.

Tech Stack: Service Fabric, Kubernetes, Istio Mesh, Envoy, Traefik, Docker, Swarm, Rancher, Zookeeper, Consul, Mesos, Marathon

Big Data and Analytics

TechFabric's built-in data analytics solutions allow you to measure, and then optimize your application for greater revenue. Deliver better experiences and make better decisions by analyzing massive amounts of data in real time. Get the insight you need to deliver intelligent actions that improve customer engagement, increase revenue, and lower costs.

Serverless Cloud Computing Technologies

Serverless is not just functions. Serverless refers to capabilities offered by a cloud platform without requiring you to provision virtual machines or installing any software. Serverless is the abstraction of servers, but that's just the beginning of the value that building a serverless computing solution provides.

When you build serverless apps you don't need to provision and manage any servers so you can take your mind off infrastructure concerns. Serverless computing is driven by the reaction to events and triggers happening in near-real-time—in the cloud. As a fully managed service, server management and capacity planning are invisible to the developer and billing is based just on resources consumed or the actual time your code is running.

TechFabric can help you take advantage of innovative serverless programming models that simplify your business applications and enable you to focus on solving business problems, rather than repetitive infrastructure management.

Serverless means faster time to market with lower infrastructure and operating costs. There are lots of use cases that can take advantage of Serverless Paradigms to build modern robust, reactive applications. For example, a Notifications Engine that sends Email, Text and Push Notifications to your customers when something changes in your system. Any process that can be asynchronously processed can take advantage of a Serverless Programming Model including IoT applications, Business Processes that get triggered by a certain event, etc.,

Tech Stack: Functions, Logic Apps, CosmosDB, Event Grid, API Management, Stream Analytics, Event Hubs, Bot Service

The TechFabric Advantage

Building the Best using Agile, Cloud & Advanced Analytics

TechFabric technologists approach each project with a high level of empathy for what the customer is looking for. Much like when building a home – we take a "measure twice, cut once" approach to requirements gathering.

We take great care in first understanding the needs of all of the stakeholders, and those of the end-user who will interact with the end product. That knowledge is then used to make sure the technology we select will meet those needs. If the application is consumer-facing, we need to understand what they expect the application to look like as well as what the administrator requirements need to be. When we begin to architect the solution, we have a complete understanding of what success looks like for each stakeholder.

From the top down, TechFabric is an agile, tech-focused company. With our deep understanding of mobile and web analytics, we can help you extract valuable insights from your web and mobile applications. Working with your product and marketing teams, we function as a true extension of your company to create and execute measurement plans that tie intelligence and analytics collected from mobile and web usage into making the best, most secure customer experiences possible.
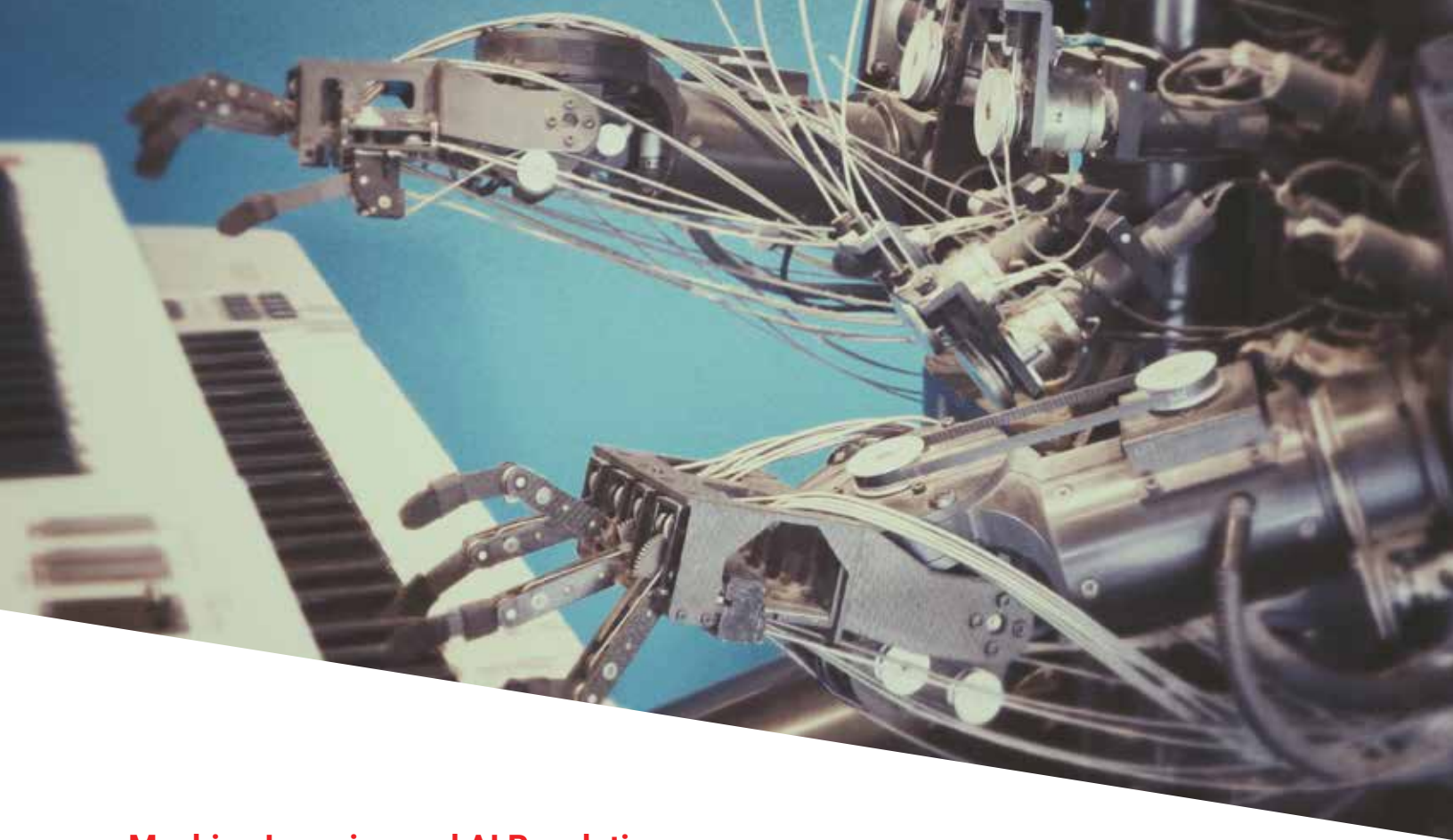
Continuous Delivery and Challenging the Status Quo

At TechFabric we are devoted to very strict agile software development methodologies, building products by constantly engaging with business owners and project leads. We ensure the business challenges are being paired with the best technology solutions available.

We're humble in our approach, and we believe in failing fast and early because this improves the success of the overall end product or business application. Approaching these in a continuous delivery manner offers profound benefits and is the glue that ties all of these initiatives together.

> Our commitment to continuous delivery ensures that we are always working on high value features and working software for your business.

Machine Learning and AI Revolution

Machine learning, a data science technique that allows computers to use existing data to forecast future behaviors, outcomes, and trends is a method where computers can learn without being explicitly programmed through a learning algorithm being applied to a data set. Today ai and machine learning are both being employed to help detect fraud and other growing security issues that don't discriminate by industry. Across all verticals, Tech Fabric expects machine learning to deliver huge opportunities for advancement, risk reduction, and acceleration in innovation.

- **In the automotive industry, for example, Fleet Management companies can better track their vehicles and do predictive maintenance.** Today's connected vehicles can do more than alert you with check-engine lights, and low-battery indicators. You can monitor hundreds of sensors and detect problems before they affect vehicle operation. By monitoring thousands of data points per second, AI can spot minute changes that may indicate a pending component failure – often long before the failure can cascade into a catastrophic event.

- **Healthcare, in particular, is rapidly implementing AI and machine learning both to help improve patient experiences in the hospital setting and also to help manage costs.** There are algorithms to detect a patient's length of stay based on diagnosis, for example. Someone had to write that algorithm and then make sure it was fed accurate and reliable data. Over time, and with more and fresher data the algorithmic model can learn and increase in its effectiveness. The potential for innovation is incredible.

- **Like healthcare, a market that also touches pretty much everyone and is being improved by machine learning is real estate.** By digitizing core areas of the real estate business, real estate professionals can better predict the market value of a property, forecast market bubbles, even evaluate customer lifetime value. For renters, automation and voice recognition can accelerate time to apartment rental or lease – that's good for both broker and apartment hunter.

Tech Fabric is uniquely positioned to help companies across industries leverage Machine Learning and Artificial Intelligence to build applications that can predict patterns, deliver actionable results, and improve the end user experience – regardless of industry in which the experience occurs.

Summary

Automation, artificial intelligence, advanced analytics and machine learning are creating new opportunities for banks, fintech lenders, and rideshare pioneers, solving persistent problems across healthcare, and over time will undoubtedly be a key growth component in every industry.   As consumers continue to drive innovation, the potential for improvement in the overall customer purchasing experience and the creation of new revenue streams are huge.

TechFabric doesn't just build applications, it builds long-term relationships with customers (and IT staff) to become a true partner in the development of innovative new products, services and business models. We do this by delivering high value projects on time and on budget with no surprises.

Let TechFabric help you bring your ideas to life and build products that will put you ahead of the competition with today's time strapped, increasingly mobile and tech-savvy consumers.

Let's Build Something Amazing Together.

Get in touch with us today.

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