

The Future of Artificial Intelligence in Consumer Experience

According to the AT&T Foundry



Developing a point of view on what the future may hold

In this third installment of The Futurist Report series, AT&T Foundry, Ericsson, and RocketSpace are taking an inside look into the cutting-edge technologies and startups shaping the Future of Artificial Intelligence in Consumer Experience.

Each report includes an industry-wide view from a diverse array of leading experts and features select startups at the forefront of technology. We dig into emerging trends and distill key insights that are reshaping entire industries and our world at large. We delve into the broader business implications of these technologies and explore indicators such as collaborators, investments, market demands and technological advancements.

We are pleased to share our point of view in The Future of Artificial Intelligence in Consumer Experience according to the AT&T Foundry.

Why Artificial Intelligence?

Though artificial intelligence (AI) has been a research focus for over fifty years, only in the last decade has it become popular for enterprise and consumer use. Falling costs for back-end technologies and capital investments from major brands have allowed for AI to prove itself successful in a variety of use cases -- and the efficiency and accuracy of the technology continues to garner attention from researchers and business leaders alike.

Alongside bigger institutions, startups have focused their efforts toward perfecting AI applications for both general purpose and narrow solutions. Investors have dedicated significant capital to the development of these technologies, and consumers are becoming attuned to a more automated world for content discovery, self-driving cars and more. Ultimately, this leads to each consumer being treated as an audience of one regardless of where they go because their experiences will be highly personalized.

To better understand developments in the AI space, we interviewed over 50 successful entrepreneurs, executives and academics leading the charge on new technologies and applications. We developed 5 bold projections that showcase how AI will impact the consumer experience in coming years. Of course, not all these projections may become a reality, but AT&T Foundry certainly intends to do its part in fostering innovation in the AI ecosystem.

Welcome to the Future of Artificial Intelligence in Consumer Experience

Ruth Yomtoubian, Director AT&T Foundry - AT&T
Ilaria Brunelli, Head of Ericsson at AT&T Foundry - Ericsson
Brad Strum, Head of Startups & Venture Capital - RocketSpace

What is Artificial Intelligence?

Artificial intelligence is the development and use of computers to perform tasks that traditionally require human intelligence, such as visual perception, speech recognition, and language translation. With AI, computers learn from data sets to understand underlying data structures and uncover procedures to make the correct use of the data.

As described in Andreessen Horowitz's AI playbook¹, it's useful to understand AI in terms of a combination of goals and techniques. AI's goals can include recognizing what's in a picture, converting voice into typewritten words, or planning a route. The techniques AI uses to achieve these goals can vary greatly, and include terms like deep learning and supervised learning.

A crucial differentiation is between AGI (artificial general intelligence) and machine learning. AGI refers to machines generally being able to carry out tasks typically performed by humans. Machine learning refers to all techniques that allow computers to "learn without being explicitly" programmed. A particular application of machine learning is deep learning, which allows for a computer to recognize patterns from both labeled and unlabeled datasets.

However, AI is broader than machine learning or its subset, deep learning. Other AI techniques include search, symbolic reasoning, logical reasoning and statistical techniques that aren't explicitly deep learning based. A truly comprehensive AI makes use of all techniques available, though the enterprise landscape is heavily focused on machine learning at the moment.



A Snapshot of Artificial Intelligence Today

The market for AI has grown tremendously in the last couple of years. Right now, approximately 1,500 companies in North America are developing AI applications including leading companies such as Microsoft, IBM, Google, and Amazon. This number is only expected to grow as institutions embrace AI's ability to increase productivity through intelligent automation, labor and capital augmentation, and innovation diffusion through AI partnerships.² Experts also forecast that annual global revenue from AI products and services will grow from \$643.7 million in 2016 to as high as \$36.5 - \$100 billion by 2025.^{3,4}

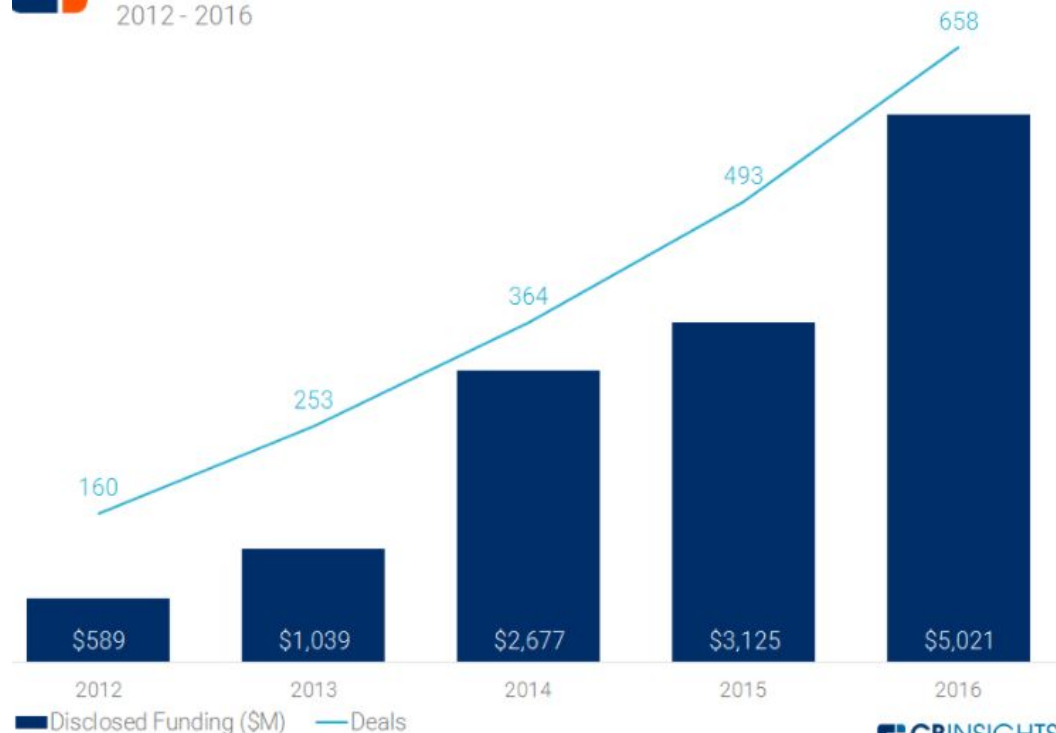
With the promise of revenue, investors have become keen on the AI space as well. Leading the charge in the AI investment space are companies like Data Collective, Intel Capital, Khosla Ventures, New Enterprise Associates, and Google Ventures.⁵ Consistent investments from these leaders, alongside other market participants has caused global AI funding to increase from \$95 million in 2011 to over \$1 billion in 2016.⁶ Last year, more than \$5 billion was invested in 658 companies -- a 61% increase from 2015.⁷

Like revenue, additional research predicts that investment in AI will grow 300% in 2017.⁸ The growth of market participants, funding and projected revenue all signal the tremendous impact AI will have on our day-to-day lives over the next few years.



AI ANNUAL GLOBAL FINANCING HISTORY

2012 - 2016



CBINSIGHTS

Source: CB Insights⁷



5 Bold Projections on the Future of Artificial Intelligence in Consumer Experience

5 Bold Projections on the Future of Artificial Intelligence in Consumer Experience

1. **Humans Have More Room to be Human**
2. **Be Everywhere as Data is Everywhere**
3. **Connectivity Instantly Powers Your Own Adventure**
4. **Consumers Go from One Click to Zero Clicks**
5. **Ethical AI Controls for Bias**



1. Humans Have More Room to be Human

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AI will fundamentally alter what it means to be human in this world. As algorithms automate away routine decision-making, people will see both an increase in the amount of time they have for tasks around critical thinking and creativity, as well as an increase in what they can do with that time.

With autonomous vehicles, it's easy to imagine a future where consumers do not spend time physically driving a car or scheduling a pick up. These actions will be automated based on behavioral patterns and work routines, leaving time and space for “higher order thinking.” Car manufacturers and ride sharing companies are challenged to reinvent the space within the vehicle based on how users will want to spend their time, when attention at the wheel is no longer required. Will users want to be entertained, do work, sleep, or socialize? Businesses within the autonomous vehicle space will need to rethink the transportation experience according to how users want to spend this time.

Higher order capabilities will be augmented by AI to extend natural barriers for conceptualization and execution of creative endeavors. Even today, visual arts and music creation tools use AI to make the composition process more intuitive to the creators' intentions and goals. AI will be a collaborator for humans as they are inspired to push past current boundaries and test new concepts across all areas of innovation. As described by Jurgen Schmidhuber, co-founder of deep learning startup NNIAIsense, “Our formal theory of fun even allows us to implement artificial curiosity and creativity, to build artificial scientists and artists.”

Ensuring that the users have the technical literacy to engage with -- and develop alongside -- AI tools will become a focal point for both traditional and career education. Meanwhile, products that go beyond functional solutions and allow users to quickly do the most interesting, exciting and meaningful things with their time, will win the consumer market.



From a human evolution perspective, AI can help each of us augment our capabilities and skills, better understand our full potential, discover ourselves and each other better. All for a better society.”

Amir Banifatemi, K5 Ventures



Automates Away Routine Tasks in Prominent Industries

In the legal industry, startup Cognitiv+ is using AI to perform risk assessment on changing legal landscapes. Though this is usually a manual research task, Cognitiv+ constantly scrapes ongoing legal data and performs up-to-date analysis, freeing up legal workers to be higher touch with their clients rather than spending research time understanding the legal landscape.⁹



Brains and Technology Partner for Creativity

Elon Musk's venture, Neuralink, has launched to ensure AI and the human brain learn and develop together through "neural lace". In the near term, Neuralink is focused on efficiently treating mental disorders through brain interfaces. However, in the long term, Musk hopes to create a dual learning process between the brain and machine so both can augment each others' capacity to think and create in this world.¹⁰



AI Augments the Human Creative Process Through Targeted Automation

Sony developed an AI music composition tool, Flow Machines, that can take in musical data and produce songs fit to specified parameters. Humans can set their intentions and perform post-creation editing, but overall spend less time in the grind of composition. Flow Machines doesn't replace human creativity; it reimagines and automates the implementation process so that humans can focus on their vision, not the minutiae of production.¹¹

Amper Music

Amper is an AI composer, performer and producer that allows users to quickly produce original music. Founder Drew Silverstein notes, “We still believe human creativity is a key component. We will always want to work with other people to create music. We want to do it as efficiently as possible...it becomes an empowering and enhancing tool for everyone.”



Mylestone analyzes thousands of user photographs and translates them into concise stories, which are then performed out loud by the device. Mylestone saves users time by interpreting large photosets on their behalf, while also centering the user experience on the value and meaning behind the pictures.



Novel Effect adds theme music as storytellers read words out loud. The startup uses voice recognition and natural language processing to determine the best soundtracks for each story, adding to the learning experience by augmenting words with curated sounds.



Slice analyzes consumers' inboxes to provide real-time updates for package deliveries as well as action items for when things go wrong. Users don't have to spend time monitoring their packages as all key insights are delivered automatically, and all necessary actions are pushed to the consumer directly.

2. Be Everywhere as Data is Everywhere




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AI applications are only as strong as the depth and quality of the data behind them. Currently, many organizations rely on proprietary data sets to train their applications, while interoperability and data-centric applications are secondary concerns. This limits the knowledge and processes a system can develop, especially with regard to customer behavior and preferences. Increasingly, institutions are recognizing that their development will be bolstered when they make their datasets available and usable by other organizations.

Shared data will enable platforms to communicate easily with one another, allowing user preferences to translate across devices and applications. The best consumer solutions will be those that effectively make use of all available customer data in a safe and secure manner to create comprehensive customer profiles and to accurately predict their needs. There are a growing number of personalized products in the market that are the result of individual consumers' aggregate purchasing and browsing data. As predictive analytic technology becomes more complex, companies will be able to create ideal products for each consumer before consumers can even request them. Customers will become accustomed to, and demand, applications that understand their preferences seamlessly.

Organizations that do not embrace data openness will be left behind by those who can act on quality consumer insights from sources both within and outside of their walls. This process includes not only exposure of current data, but the development of applications that are focused on secure transfers of centralized data from the beginning. Companies that set their infrastructure up for secure interoperability will be able to meet consumer demand for intuitive interfaces and applications more quickly.

For the consumer, this means less time spent on programming preferences and a more fluid user experience across devices. It also entails a public discussion around privacy rights and what types of data are appropriate for enterprise use, as a singular company's user information will become everyone's information.

A background image for a quote featuring silhouettes of several people standing and looking out over a landscape at sunset or sunrise. The sky is filled with warm, orange and yellow light, and a few stars or distant lights are visible. The people are in various poses, some looking towards the horizon, others looking at each other. The overall mood is contemplative and collaborative.

“ The industry needs to work together. The community needs to work together to establish standards surrounded by frameworks. The lack of interoperability is slowing the industry down.”

Andrew Feldman, Cerebras



New Platforms Address the Need for AI Integration for Consumer Challenges

Element AI is a recently-launched platform dedicated to connecting AI sources and tools between institutions, from academic research labs to business applications. Its CEO, Jean-Francois Garne, predicts the AI market will consolidate in the next few years as partnerships form and resources become concentrated. By working together, companies will be able to solve bigger consumer challenges than they could with their own limited resources.¹²



Corporations Partner to Share Data and Create AI Applications

In March 2017, IBM Watson and Salesforce partnered to automate business decision processes together. Some use cases include applying AI to data about shopping patterns, weather forecasts and customer preferences allowing a retailer to send automated yet personalized emails to potential shoppers near a specific store. The partnership boosts each tool's technical capability beyond what they could do alone and improves the experience for both companies' customers.¹³



Security Issues are Addressed in a Shared Data Environment

AT&T is working on AT&T Network 3.0 Indigo. The platform will foster data communities – trusted environments where organizations can share data and collaborate on analytics. Communities will feature strong identity management, a policy engine, rightful retention of data ownership, and analytics. They will run on a software-defined network with secure access channels. Indigo emphasizes security in a shared data platform.¹⁴



Resonance is a platform for understanding and translating user preferences across devices and applications. It allows developers to bring contextual awareness and user habits across applications through Android, iOS and web SDKs. Its platform gathers data from multiple sources to create a comprehensive view of users' habits and automates integrated products on their behalf.



Hutoma provides a centralized marketplace and network for AI chatbots. Because Hutoma provides the neural networks behind chatbots, developers can focus on their specific use cases and customer experiences. As all bots created on the Hutoma platform share the same nervous system, they can easily talk to one another and make use of each others' user knowledge. Hutoma's CEO, Mauricio Cibelli, notes that deep learning will be a commodity soon and successful organizations will be those who have access to quality data.



Mighty AI is a platform that provides "training data as a service." From computer vision to natural language processing, Mighty AI provides centralized backend training models for organizations to use for their proprietary applications. The use of centralized training data across the technology industry will allow for standardized AI languages to arise, as well as make easier the development of data interoperability protocols.



Data Does Good gives consumers the option to aggregate their e-commerce histories and sell the data to advertisers, with a portion of the proceeds going to non-profits of the user's choice. The benefit corporation promotes an ethical method of aggregating, centralizing and selling consumer data that could, in turn, enable a personalized advertising experience.



3. Connectivity Instantly Powers Your Own Adventure

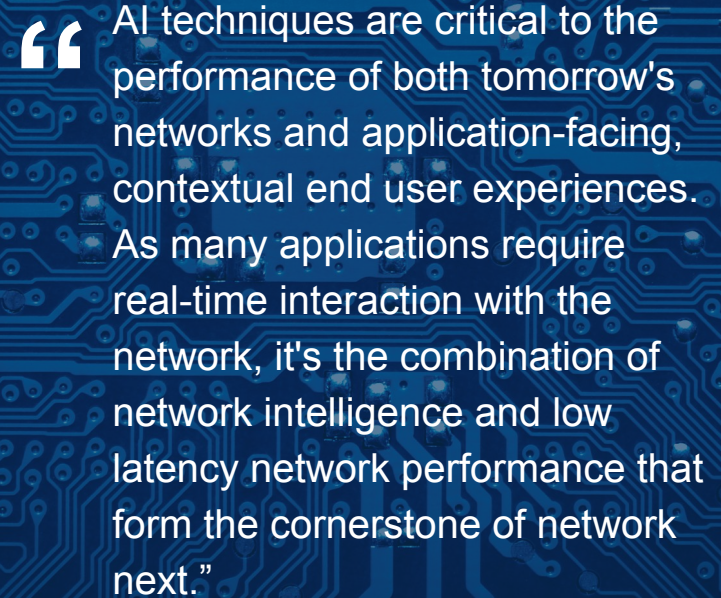
3. Connectivity Instantly Powers Your Own Adventure

In the last report, we described the entertainment industry's shift toward mobile content and immersive user experiences. Beyond YouTube and Snapchat, consumers will use newer technologies like augmented and virtual reality, haptic feedback for sensory experiences, and algorithmic storytelling. As consumer demand for these immersive interactions increase, underlying network and infrastructure will require more strength.

AI has three major impacts on connectivity networks: 1) it allows for accurate traffic and pattern analysis to troubleshoot problems as they occur, in turn allowing for 2) a constant state of connectivity that's optimized for any experience across any set of devices, and 3) pulls disparate information from multiple channels to simplify and quickly contextualize what users need.

Messaging as a Platform, or MaaP, has emerged as a leading platform for AI innovation. Faced with a plethora of mobile applications to choose from, customers are increasingly using messaging as a simple channel through which to efficiently access information, entertainment, and amplify every day interactions. Leading global trade body GSMA has an active project that fosters an ecosystem of chatbots¹⁵ to support conversational commerce and intelligent assistants through messaging, in which AT&T is a contributor.

Intelligent networks will be able to predict network optimization demands and grid failures before they occur, and proactively implement solutions so that the consumer never experiences the problem. The resulting state of robust connectivity will allow brands to make use of real-time user data to produce more relevant experiences both on devices and between devices. Imagine a world where media platforms instantaneously update contextual user preferences across devices without having to ask for user input at any point. Voice-enabled devices pick up cues quickly and execute seamlessly on the optimized connection network. Televisions predict what you want to watch before you even turn them on. With the help of AI, the end user experience will be a smooth interaction across applications and devices.



“ AI techniques are critical to the performance of both tomorrow's networks and application-facing, contextual end user experiences. As many applications require real-time interaction with the network, it's the combination of network intelligence and low latency network performance that form the cornerstone of network next.”

Diomedes Kastanis, Ericsson



The Government Calls for Optimization to Overcome Network Scarcity

DARPA is trying to solve problems caused by crowded electromagnetic spectrum by holding a contest for AI research teams. Up to \$2 million will go to the team whose machine learning radio system can best expand the spectrum's signal-carrying capacity. Through this challenge, DARPA hopes to identify best-in-class solutions for discerning dynamic spectrum environments and optimizing how users share the network.¹⁶



AI Solutions Manage and Troubleshoot Connectivity Networks

Due to the rise in IoT devices, the strain on connectivity networks will grow significantly in the next few years. AT&T is using AI tools to adjust to real-time spikes in usage and will deploy tested solutions in similar circumstances in the future. Over time, the technology will anticipate usage spikes and prepare accordingly--not simply react to spikes as they happen.¹⁷



New Hardware Allows Devices to be in Constant Conversation

According to Derek Meyer, CEO of Wave Computing, neural networks will become an integral part of how devices function. Machine learning will be pushed to wherever the data is, and consumers will be able to freely speak to digital assistants about what they want accomplished. Assistants will be able to execute tasks across platforms, devices and networks due to the constant connection across all of them.¹⁸



Wave Computing provides hardware that supports machine learning with far more efficiency than both CPUs and GPUs. It supports optimization across data centers and sets up a cohesive AI environment for applications, computers and data infrastructure alike. This allows AI to work across business technologies at once, optimizing performance and learning across all platforms.

The logo for Neurence consists of the word "NEURENCE" in a white, uppercase, sans-serif font, centered within a dark purple rectangular background.

NEURENCE

Neurence has built an intelligent, cloud-based AI engine that allows computers to make intuitive sense of unstructured human environments. Use cases include equipping wearables with computer vision, which allows connected devices to learn from each other. The startup translates AI learnings across use cases and devices, with a central repository to manage performance across the board.

The logo for bitfusion features the word "bitfusion" in a dark blue, lowercase, sans-serif font. The letter "i" is stylized with a short blue horizontal line extending to the left from its dot.

bitfusion

Bitfusion built a co-processor virtualization engine that makes at-scale computing accessible to any organization and acts as the operating system for the next generation computing. Their products enable develop-train-deploy deep learning applications and can cluster, share, scale and manage compute resources to reduce the costs of the AI application lifecycle. It works on both data centers and cloud infrastructure, and supports all configurations of AI applications and software stacks.

The logo for Bridge.ai features a large, dark grey chevron symbol pointing to the right, followed by the text "Bridge.ai" in a dark grey, sans-serif font.

> Bridge.ai

Bridge.ai is a smart home platform that understands sound beyond just speech. Ambient audio in the home is continuously analyzed to locally and securely understand context—giving Bridge-enabled devices a sense of acoustic awareness, and allowing them to anticipate and respond to patterns from their users' daily lives. The result is a thoughtful and intuitive user experience, effortlessly personalized for each individual.

A person is sitting in the driver's seat of a car, holding an open book and reading. The car's interior is visible, including the steering wheel and dashboard. The dashboard features a large infotainment screen displaying a map with various icons and a speedometer showing 48 mph. A heads-up display (HUD) is visible on the windshield, showing the text "Self-Driving" and a lane departure warning icon. The overall scene is dimly lit, suggesting a focus on the futuristic technology.

4. Consumers Go From One Click to Zero Clicks


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Experts predict that in five years, 85% of business relationships with consumers will be managed without human interaction.¹⁹ Though there's already an industry-agnostic mantra on making business decisions with consumer needs as the primary driver, today's understanding of the consumer is nowhere near what it will be when AI becomes mainstream. Due to ongoing data analysis at both individual and aggregate consumer levels, brands will create experiences that naturally integrate with each consumer's day-to-day lives.

Consumers will no longer need to change their daily schedules or patterns of communication in order to get what they need from their favorite brands. Due to a deep comprehension of the customer, brands will provide sublime experiences catered to users' behavioral patterns. Everything from shopping to driving will draw from user behavior to become highly pertinent and personalized to the end consumer. Intelligent prediction and optimization will allow the consumer to feel that each branded product or experience is made just for them.

Corporations will be able to assess shopper inventories and consumer behaviors to predict what items will be needed and deliver them directly to consumer homes before they even realize they're running low. Even asking for help on an order will become more natural as platforms infuse AI with emotions to empathize with consumer needs and communicate solutions conversationally across interfaces. With self-driving cars, consumers' preferred routes and in-vehicle entertainment choices will draw from past behaviors (even those on other devices) to optimize both daily commutes and cross-country road trips.

Brands will act as “personal concierges” for a consumer's needs, knowing what they want and how and when they want it before the consumer has to say anything at all.



“What a brand wants to create is that moment of serendipity when you just “click” with the consumer. That’s the best experience a brand can have. How can you create that moment of serendipity at scale using AI?”

Andy Mauro, Automat



Retailers Test Models for “Anticipatory Shipping”

Amazon has patented an AI methodology to anticipate what shoppers want and ship it to their location of choice before they even realize they need it. Shoppers will receive the goods they want or need without having to take the time to schedule and order themselves. Through predictive modeling, the technology allows for the most cost-efficient delivery of goods and captured incremental sales and revenues.²⁰



Brand Interactions Incorporate Emotional Intelligence at Scale

Startup Soul Machines has launched a conversational bot that combines Natural Language Processing (NLP) chat with emotional recognition. Alongside holding conversations based on users’ normal words and speech patterns, the bot can adjust its messaging to match users’ emotional states. Accordingly, retailers using this feature can connect with their consumers on a more natural, human level through AI-generated communications.²¹



E-Commerce Becomes 100% User Experience Focused

In late 2016, Etsy bought AI startup Blackbird Technologies to ramp up its recommendation and search engines. By having a stronger understanding of users needs and tastes, Etsy makes product finding effortless for consumers by precisely showing them what they want. Consumers can spend more time looking at things they’re likely to buy rather than searching. The overall e-retail experience improves to become a far more intuitive experience.²²

Startups



DigitalGenius brings practical applications of deep learning and AI to customer service operations of large and growing companies. By taking over repetitive manual tasks, DigitalGenius unlocks time for human agents to conduct better service and provide amazing experiences for customers. Among current clients DigitalGenius is used to support more than 50% of all customer service cases for channels such as email, messaging and chat.



Kasisto's conversational AI platform called KAI Banking powers omni-channel bots and virtual assistants with deep domain expertise in finance. Financial institutions license the platform to help their customers track expenses, analyze spending, make payments, and more via natural, intelligent conversations. With contextual and personalized conversations, the KAI-powered bot can fulfill requests, solve problems, and predict needs. Data-driven insights and actionable recommendations make banking intuitive and seamless.



Propulse Analytics is an AI engine that combines user desire and product availability in order to suggest the right products at the right time. The startup combines a deep understanding of consumer tastes with inventory analysis in order to create a streamlined experience for both the consumer and retailer.



Msg.AI provides an conversational AI platform for commercial relationships. It allows brands to reach consumers through texting -- a medium more users prefer over email or phones. Their NLP solution allows brands to engage with users on a platform they prefer in a language they understand.

5. Ethical AI Controls for Bias

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The ethical impact of AI and automation is far reaching. One aspect corporations and institutional developers have direct control over is bias mitigation within their datasets and applied algorithms. In order to make AI work for all of society, application and platform developers will have to become conscious about the ways unmonitored data sets can aggregate and apply traditional human biases such as racism and sexism, and work towards mitigating these effects in the long term.

In nascent AI applications, we have already seen ethical dilemmas with computer vision technologies not accurately recognizing the physiological characteristics of certain races and amplifying systemic biases contained within existing data sets. For example key risk assessment algorithm used by the U.S. criminal justice system was found to be biased against black people in 2016. When used without human oversight, this algorithm would imprison black people at greater rates and for longer sentences than it would for the same crimes committed by other races.²³

As users come from all backgrounds, the successful integration of AI into society is dependent on producers' ability to account for algorithmic biases before they become mainstream. Corporations will need to be cognizant of the potential for bias at every step of developing AI solutions, from capturing data optimized for all types of consumers to implementing parameters that account for the diversity of users' socio-economic backgrounds.

As Tim Chang of the Mayfield Fund notes, "There are probably going to be data ethics teams within companies -- that will be a job requisition out there soon." Diverse teams truly capable of understanding the impact of bias mitigation will become the norm as corporations develop experiences that benefit consumers from all corners of the globe.

“

Societal biases exist and are reflected in data used to train models. Faulty data means faulty conclusions. Companies need to prioritize diverse teams so that many eyes are watching for detrimental biases from various perspectives to lower the risk of them being learned by AI

Mariya Yao, TOPBOTS



Corporations Witnessed Public, Brand-Damaging Ethical Failures

In March 2016, Twitter chatbot "Tay" was created to test how AI can learn from interactions with real Twitter users over time to have human-like conversations. The system was manipulated by users into tweeting racist and sexist comments, causing the creators to shut Tay down and emphasizing the need for bias control in future AI systems. Zo.ai was recently created as Tay's successor, which is designed to develop as a conversational chatbot like Tay but is built with constraints, such as limitations in discussing politics.²⁴



Tech Leaders Partner to Address Social Impact of Artificial Intelligence

Amazon, Facebook, Google, Microsoft and IBM have launched the "Partnership on AI to Benefit People and Society." They intend to work with academics and researchers to ensure AI's trustworthiness in the future, as well as diffuse fears and misperceptions about technology in the public.²⁵



Advertising Highlights System Disparities in Popular Algorithms

Researchers at Carnegie Mellon University have identified that Google's online advertising engine served ads for high-income jobs more often to men than women. University of Washington researchers also noted that a Google image search for "C.E.O" produced 11% women, though 27% of U.S. CEOs are women.²⁴ Algorithms untrained to mitigate human biases can escalate them to the point of inaccuracy.²⁶

Startups



Koru performs analysis on job applications, measuring candidate fit in addition to objective qualifications. The startup focuses on selection based on personal traits, independent of socio-economic factors. It aims to assess candidates' appropriateness for the job based on past performance and correlation with traits found in previous successful hires.



Talent Sonar trains its solutions specifically to reduce bias throughout a company's hiring process - from application acceptance to interview performance analysis. Though AI can often exacerbate bias, startups like Talent Sonar focus on training their algorithms to do the exact opposite.



Joonko is developing solutions to reduce workplace bias in order to create a more inclusive workplace. It provides real-time feedback to managers to adjust their decisions and account for systemic biases against discriminated classes of workers.



Glassbreakers offers enterprise software solutions for employee inclusion. This technology scales data-driven mentorship, employee resource group management, and diverse talent development analytics for Fortune 500 companies. Inclusion inspires innovation, improves employee retention and financial returns with software that enables employees to bring their whole selves to work.

Conclusion

AI will have an enormous influence on the way we live our lives. From enabling hyper-personalization to saving huge amounts of time on routine tasks, these new tools will fundamentally shift the way we interact with technology in our day-to-day lives.

As AI becomes normalized, industry leaders must be cognizant of the ways the technology is implemented so that consumers from all ends of the spectrum can benefit. This means optimizing data storage and transfers at the backend to create fluid experiences. It also means making sure that AI that is rolled out to the public has accounted for the systemic biases that can aggregate within algorithms.

Though there are rightful concerns regarding the social impact of data sharing and automation, from privacy rights to job replacements, we have confidence that leaders from both governments and industries will work together to govern our artificially intelligent future with foresight and empathy. We, at AT&T Foundry, look forward to pursuing innovation in the AI ecosystem with the benefit of all consumers in mind.



In a world where businesses compete on customer experience, practice applications of AI will set companies apart and lead to proactive, intelligent, and thoughtful relationships with their customers.”

Mikhail Naumov, DigitalGenius

About the Authors

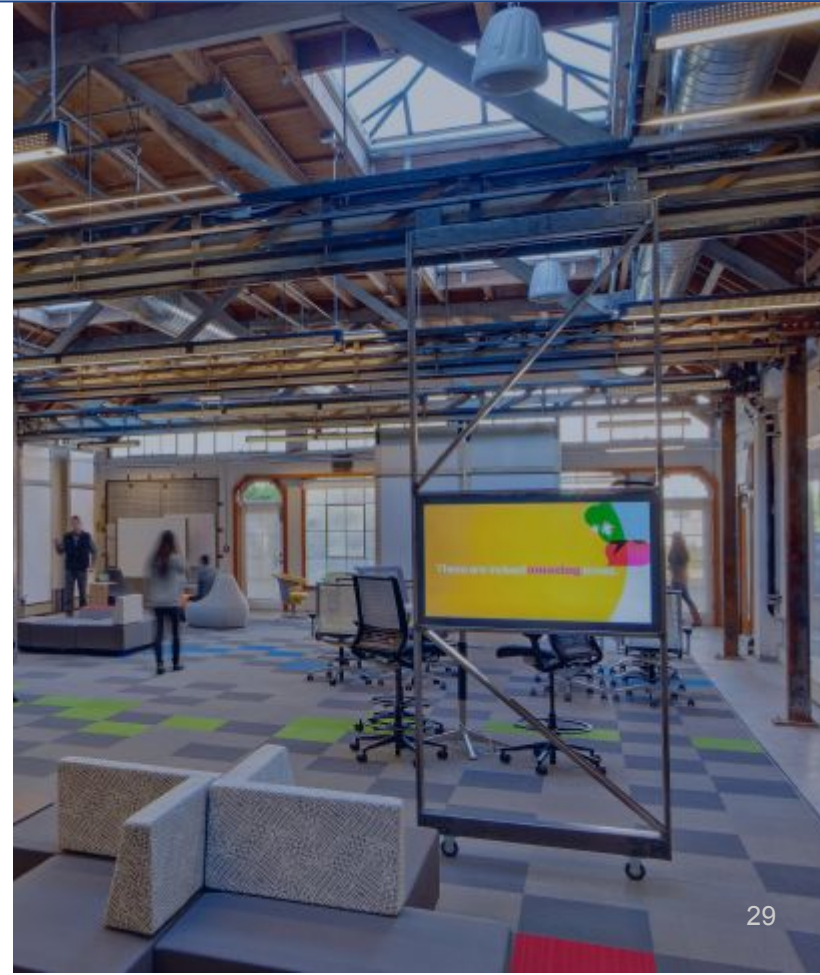
AT&T Foundry

At AT&T Foundry, we assemble diverse teams to explore bleeding-edge technologies, solve high-impact business challenges, and create empowering services for our customers. We continually look for innovative players to work side-by-side with us as we tackle some of today's biggest problems.

AT&T Foundry is set up to take great ideas and to bring them to life. In fast-paced and collaborative environments, teams from across our business and the industry work together to explore new technology, to solve business challenges and to power new services for customers.

The innovation center is a high-tech hybrid of cutting-edge technology and constant collaboration. It is a welcoming environment that not only collaborates with third parties but also with diverse teams throughout the business. We act as a nerve center where all parts of the company can work with our teams to take the innovation process to new levels. We support those with whom we work with the right mix of technology, design resources, and expertise. Our approach lets us move ideas to the marketplace up to three times faster, cutting development time from years to months.

<http://about.att.com/innovation/foundry>



Ericsson

As the sponsor of AT&T Foundry in Palo Alto, California, Ericsson works closely with AT&T collaborating on its next generation problems. Ericsson has a seat at the table with AT&T exploring the future together.

Ericsson is the driving force behind the Networked Society—a world leader in communications technology and services. Our long-term relationships with every major telecom operator in the world allow people, business and society to fulfill their potential and create a more sustainable future.

Our services, software and infrastructure, especially in mobility, broadband and the cloud, are enabling the telecom industry and other sectors to do better business, increase efficiency, improve the user experience and capture new opportunities.

With approximately 115,000 professionals and with customers in 180 countries, we combine global scale with technology and services leadership. We support networks that connect more than 2.5 billion subscribers. Forty percent of the world's mobile traffic is carried over Ericsson networks. And, our investments in research and development ensure that our solutions and our customers stay in front.

Founded in 1876, Ericsson has its headquarters in Stockholm, Sweden. Ericsson is listed on NASDAQ OMX stock exchange in Stockholm and the NASDAQ in New York. For more information, please visit www.ericsson.com.



RocketSpace

RocketSpace is a technology campus headquartered in the heart of San Francisco. Since 2011, the company has been helping tech entrepreneurs, startups, and corporate innovation professionals bring the future to market. With 18 unicorns and counting, select startup alumni include Uber, Spotify, Practice Fusion, SuperCell, Hootsuite and Leap Motion.

RocketSpace's Corporate Innovation team has helped more than 170 brands worldwide transform into modern corporations—including Schneider Electric, Converse, Tata Communications, Royal Bank of Scotland, Pfizer Consumer Healthcare, Samsung, and ABInBev. RocketSpace clients create new opportunities from inside and outside their organizations to ensure they are leading the disruption in their industry and not being disrupted. From financial services, to telecommunications, pharma, consumer electronics, retail, energy, and beyond—RocketSpace's innovation expertise spans every sector and industry.

The world is moving at unprecedented speed as we are living in an era of exponential change. Technology innovation is disrupting traditional business models overnight. RocketSpace knows disruptive trends, business models, and startups that impact corporations today, tomorrow and beyond. With access to nearly 200 startups on its San Francisco campus and access to hundreds of thousands around the world, our team focuses on bringing together corporates and startups for mutual benefit. Our work is helping to bring together the strengths of corporates and startups to fuel next-generation innovation, together.

For more information, visit www.rocketSPACE.com.



Full Interview List

Algorithmia

Amper

Automat

Ava

Cerebras

Clarifai

Data Collective

Element AI

Emteq

Ericsson

Exceed

Hutoma

Mayfield Fund

The Curious AI Company

Microsoft

Mighty AI (Spare5)

Mind Foundry

Mode.ai

Msg.ai

Mylestone

Netra

NYU

Permutation Ventures

Propulse Analytics

Re:infer

Rice University

Snips

The Hive

Twentybn

Utrip

Wave Computing

Weave

AT&T Labs

AT&T Foundry

Olivia.AI

Showdown

SaPHIbeat Technologies

Comet Labs

Novel Effects

NVIDIA

Appendix

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