



# Consulting Services

Harness the potential of your data with our cutting-edge services that enable your business to become predictive, secure and autonomous.

# Table of Contents

4	19
About Us	Digital & App Innovation Services
5	21
Why Data Science Dojo?	Related Case Studies
6	26
Our Capabilities	Generative AI Services
8	28
Data and AI Services	Contact Us
11	
Related Case Studies	

# **About Us**

Consulting Partner

# Data Science Dojo: Your Business Impact Partner

Data Science Dojo has been a pioneering force in the data science domain for over a decade.

We specialize in transforming complex challenges into lucrative corporate opportunities for our clients and offer consulting services to help them maximize their business potential

To date, we have successfully upskilled 10,000 graduates for more than 2,500 companies across 150 countries.

Our expertise extends beyond education. We are a longstanding partner of Microsoft in the field of Data and AI.

With the support of the Azure Sales Enablement Team, we have developed a multitude of demos that span various industries, including healthcare, manufacturing, retail, public sector, media, and finance.

Our mission continues to guide us on this important work towards building a solid data strategy and architecture that has helped our clients effectively capture, store, process, and analyze data, critical for making data-driven decisions.



# Why Data Science Dojo Consulting Services?

When it comes to data science, partnering with a consulting service like Data Science Dojo can be a wise choice for businesses seeking to take their operations to the next level.

In the rapidly evolving business landscape of today, having a strategic partner that comprehends data science and technology is crucial. At Data Science Dojo, we're here to fulfill that role.

## Your Data Journey Starts Here.

Our team of experts delivers customized solutions that start with a deep understanding of your business goals and data requirements. We offer end-to-end data services, from designing and implementing data pipelines to managing data storage and machine learning.

Our goal? To get data-driven insights that enable better decision-making and improved performance, setting you apart from the competition. And with our proven track record of success and commitment to transparency and collaboration, you can trust us to help you achieve optimal business success.



### **Proven Track Record**

Our cutting-edge solutions incorporate the latest technology and best practices to ensure maximum impact and ROI for your business.



### **Customer-first approach:**

Our focus is always on you, and we're dedicated to delivering solutions that meet your needs and exceed your expectations.



### **Global presence**

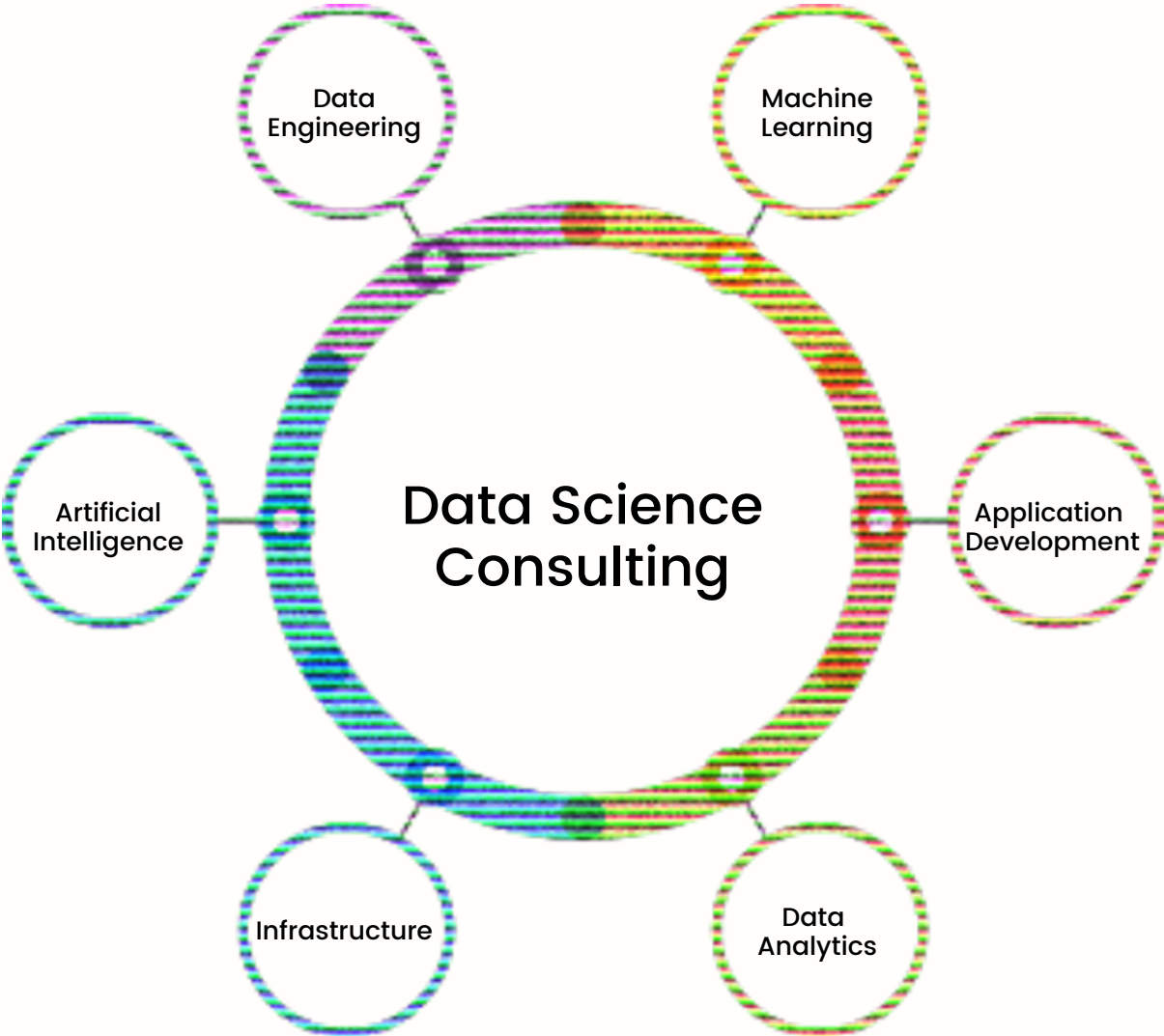
With a worldwide network of experts, we can provide local support and global scalability for any project, big or small.

# **Our Capabilities**

# We optimize, you capitalize

Our area of expertise includes data engineering, machine learning, artificial intelligence, application development, data infrastructure, and data analytics

Now, let us delve into our flagship consulting projects that have solidified our position as a leading consulting services firm.



# 1.Data and AI Services

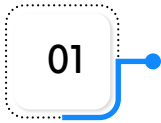


A solid data strategy is indispensable for businesses. As a data science and technology consulting service, we collaborate with our clients to facilitate the accomplishment of their strategic objectives. Our technical expertise, blended with our business acumen, sets us apart from other consulting firms.

Plus, our service offering is not limited to technical solutions. We work closely with our clients to identify their specific business needs and objectives, thereby developing customized data strategies aligned with their priorities.

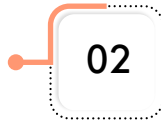
With our expertise, you can convert challenges into opportunities, and establish your leadership position within your industry.





### Data Strategy

We help companies with data strategies, analytics, AI roadmaps, and team planning to stay competitive.



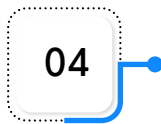
### Data Engineering

We help businesses build robust big data pipelines and data warehousing solutions.



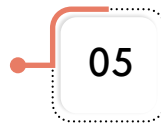
### Machine Learning

We help businesses understand and leverage machine learning to solve business challenges.



### Artificial Intelligence

We aid businesses to leverage the power of AI to unlock insights, improve operations, and transform customer experiences.



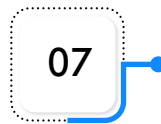
### Data Analytics

We provide real-time analytics solutions with data pipelines, software integration, and custom dashboards.



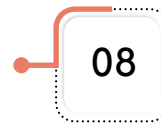
### ML Modeling

We build predictive models for your business, hosted by us or integrated into your environment.



### Data Pipeline

We specialize in data pipelines, aggregating all your sources into a single source of truth.



### Data Governance

We offer data control, access creation, usage monitoring, backup, and automated discovery & classification.

# **Related**

## Case Studies

# Healthcare Case Study

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## Automating HIPAA Identifier Extraction for a Medical Equipment Company

### INTRODUCTION

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A medical equipment company partnered with Data Science Dojo to automate the extraction of HIPAA Identifiers from referral documents. Our team used NLP and ML techniques to enhance their processes and improve document processing and patient lookup

### CHALLENGE

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Our client had a dataset of over 200,000 referral documents with 500+ different formats and no proper labeling. Manual extraction of HIPAA identifiers from such a large dataset was a tedious and error-prone task. Our goal was to develop an automated system to extract the desired fields accurately.

### SOLUTION

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We started by carefully sorting and categorizing the documents to create a representative document corpus. We then utilized NLP techniques to preprocess the documents and identify relevant features. Using a combination of traditional and deep learning algorithms, we developed an ML model to accurately extract the desired fields.

**No. of document to analyze**

200000+

**Accuracy on referral documents**

90%

**No. of formats observed**

500+

**Accuracy on other documents**

75%

Our automated HIPAA identifier extraction system achieved an impressive accuracy rate of approximately 90% on a test set of 929 referral documents. It also demonstrated strong accuracy on an additional 425 documents, resulting in an overall accuracy of 75% on new data. Our implementation significantly reduced processing time and improved patient lookup accuracy, allowing the client to effortlessly process over 100,000 patient information requests.

## CONCLUSION

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Our collaboration with the medical equipment company resulted in the successful implementation of an automated HIPAA identifier extraction system. This system improved efficiency and accuracy in processing patient data, which will enhance the client's operations and improve their overall business outcomes.

# Human Resources Case Study

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## Improving Workforce Management: The AI-Powered Recommendation System for Workforce Migration

### INTRODUCTION

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Managing a large workforce can be a complex and time-consuming task, requiring significant resources and expertise. To address this challenge, a company developed an innovative full-stack MERN application featuring AI-based recommendations for job and people matching. The application includes backend and frontend interfaces for employee assignment management, as well as Power BI dashboards with charts for data insights, streamlining workforce migration management.

### CHALLENGE

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Our client, with 17,761 employees and an annual revenue of over \$2.5 billion, needed an effective solution for workforce migration management to reduce the time and resources required for the task. The manual approach was complex, time-consuming, and error-prone, leading to suboptimal workforce management decisions.

### SOLUTION

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We developed an AI-based recommendation system for workforce migration management to help our client optimize their operations. The system provides job and people matching recommendations through backend and frontend interfaces, as well as Power BI dashboards with data insights.

**Time Saved**

80%

**AI Recommendations Count**

~ 10000

**Created Power BI Reports**

09

**API Integrations Count**

10

Reduced workforce management time by 50% and improved productivity with 10,000+ job recommendations.

The application was also integrated with 10 APIs for real-time data access. Overall, our AI-based recommendation system provided significant time savings and enabled the client to focus on their core business activities. With access to data-driven insights and a more efficient workforce management process, the client was able to make informed decisions and optimize their operations for better results.

## CONCLUSION

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The AI-based recommendation system for workforce migration management revolutionized the client's approach to workforce management. The system enabled the client to make data-driven decisions, resulting in significant time savings and a more streamlined workforce management process.

The company's innovative solution resulted in successful project completion in January 2023, demonstrating the power of AI-based technology to enhance workforce management.

# Manufacturing Case Study

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## A Dream Demo Deployment Showcase on Azure for a manufacturing giant in South Korea

### INTRODUCTION

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We helped a manufacturing leader overcome data challenges with our innovative solution. Our advanced techniques provided real-time insights from demo data, and a customizable reporting system allowed for strategic decision-making. This case study showcases our success in overcoming data analytics and governance challenges in the manufacturing industry.

### CHALLENGE

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The manufacturing industry generates vast amounts of data from various sources, making it difficult to manage. The lack of proper data governance can result in inaccurate decision-making and decreased operational efficiency. The client faced similar challenges and needed a solution to help them overcome these obstacles.

### SOLUTION

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Our team used Azure services like Purview and Machine Learning to develop an innovative data analytics and governance solution for the manufacturing client. We deployed the Dream Demo, showcasing machine learning, data visualization, and data governance capabilities using demo data.

**No. of dashboards deployed**

15

**Custom Data Lineage Count on Purview**

06

**Data Assets Uploaded on Purview Count**

643

**Machine Learning Solutions**

06

**Data Sources Registered on Purview Count**

07

**Purview Glossary Terms Count**

48

The project deployed 15 customizable dashboards for data visualization and analysis and showcased 6 machine learning solutions for creating a smart factory, improving worker safety, and optimizing manufacturing operations. Additionally, we created 6 custom end-to-end data lineage flows on Purview, registered 7 disparate data sources, and uploaded 643 data assets onto the platform. To ensure consistency in data interpretation across the organization, we created a comprehensive glossary of 48 terms on Purview.

## CONCLUSION

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The project used advanced data analytics and governance in manufacturing through Dream Demo. It showcased machine learning, data visualization, and data governance to improve operations and decision-making. It emphasized the importance of technology for digital transformation and efficiency in manufacturing. Completed in May 2022.



## 2. Digital & App Innovation Services

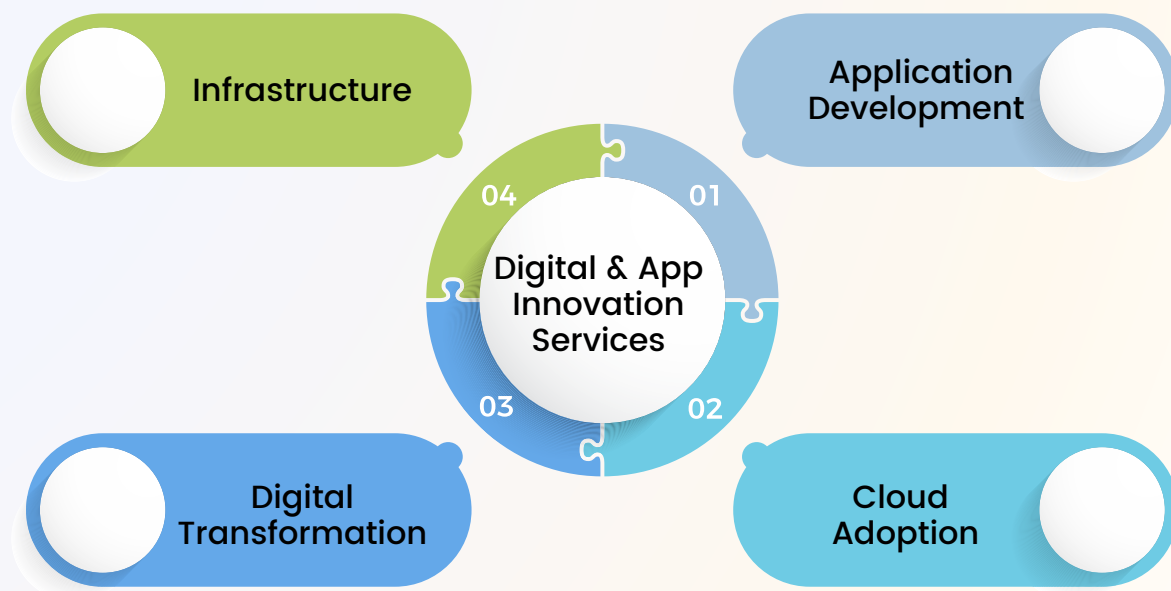
The secret recipe behind bridging the gap between the power of a design-led approach to digital process simplification is digital transformation.

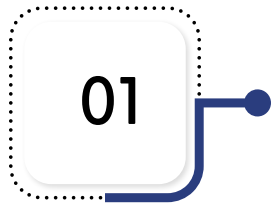
With the high demand for digital transformation consulting services, Data Science Dojo is standing out from the competition.

Our Digital & App Innovation Services offer everything from Application Development to Speech and Text Services, Digital Transformation, and Infrastructure optimization.

Apart from complex jargon, our defining edge is our team of data science experts. With their extensive experience, they can help businesses leverage the power of digital technologies to enhance their data analytics capabilities and gain insights that drive growth and innovation.

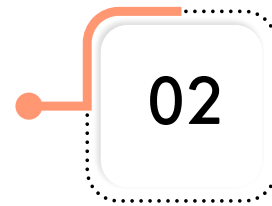
This is your sign to carve your niche with us and transform your operations and stay ahead of the game with Data Science Dojo by your side.





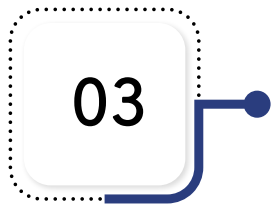
## Application Development

We craft tailor-made applications using top-notch Microsoft technologies such as Power Platform, .NET, and Azure.



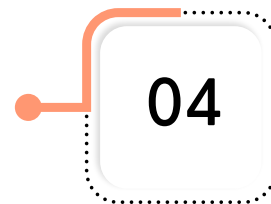
## Cloud Adoption

Accelerate your cloud adoption journey and optimize your AI infrastructure for maximum efficiency and cost savings.



## Digital Transformation

We define digital transformation strategy and roadmap that supports you throughout the transformation journey.



## Infrastructure

We help businesses take advantage of Microsoft Azure's power to create, deploy, and manage their applications and services.

# **Related**

## Case Studies

# Pharmaceutical Case Study

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## Streamlining Data Management and Empowering Data-Driven Decisions at a large pharmaceutical company

### INTRODUCTION

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We helped a leading pharmaceutical company achieve digital transformation goals by creating a comprehensive, multi-phase data pipeline creation and automation program. The project aimed to streamline data management and empower data-driven decisions through the creation of customized dashboards for various departments.

### CHALLENGE

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The client faced challenges in understanding and utilizing their data due to a lack of a comprehensive data pipeline and automated reporting system. The client's legacy system generated quarterly reports, which took an estimated three months each time. The client needed a solution that could improve data visibility, reduce time spent on data management, and facilitate informed business decisions.

### SOLUTION

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Our team developed 7 pipelines from 4 SAP sites and 3 others. They made 15 dashboards with different views for 5 departments, for monthly data viewing. Advanced analysis techniques provided insights into data.

**No. of pipelines created**

07

**No. of dashboards created**

15

**Time saved**

≈ 3 months

**Complete pipeline refresh in**

30

The application was also integrated with 10 APIs for real-time data access. Overall, our AI-based recommendation system provided significant time savings and enabled the client to focus on their core business activities. With access to data-driven insights and a more efficient workforce management process, the client was able to make informed decisions and optimize their operations for better results.

## CONCLUSION

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In a nutshell, our customized email app provided a practical solution to the racing company's challenges of knowledge transfer and employee turnover. It streamlined operations and provided valuable insights from email data, resulting in increased operational intelligence and cost savings.

# Inter-Government Case Study

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## A Grants Management System to Address Irregular Migration from Guatemala towards the US Southern Border

### INTRODUCTION

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The irregular migration from Guatemala towards the US southern border has been a major problem, which an inter-governmental organization is attempting to address through a grant's mechanism. Data Science Dojo has developed an online grants management system to provide oversight and management of the grants activity cycle.

### CHALLENGE

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The inter-governmental organization needed a system to manage grants and ensure successful oversight of the program. The system had to be able to handle different activities and contribute towards the overall program strategy.

### SOLUTION

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We created a grants management system with automated workflows, advanced data analytics reporting, and state-of-the-art software infrastructure. The system follows industry standards and includes UIs, APIs, and databases in DEV, UAT, and PROD environments. It offers a multilingual experience for users and is configured with Continuous Integration and Deployment pipelines for smooth deployment and updates.

**No. of environments**

03

**CI/CD pipeline configured**

Yes

**No. of analytics BI dashboard**

02

**Multi-lingual**

Yes

Our automated HIPAA identifier extraction system achieved an impressive accuracy rate of approximately 90% on a test set of 929 referral documents. It also demonstrated strong accuracy on an additional 425 documents, resulting in an overall accuracy of 75% on new data.

Our implementation significantly reduced processing time and improved patient lookup accuracy, allowing the client to effortlessly process over 100,000 patient information requests.

## CONCLUSION

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The Grants Management System developed by our team has provided a solution to the problem of irregular migration from Guatemala toward the US southern border. The system has enabled the inter-governmental organization to manage grants and ensure successful oversight of the program.

Our cutting-edge software engineering techniques used have elevated government and institutional operations, enabling organizations to operate at a level of efficiency and productivity that was once thought unattainable.

# Car Racing Case Study

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Knowledge transfer and reducing turnover: How Data Science Dojo's customized email web app improved operations for a leading racing company



## INTRODUCTION

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The management of knowledge transfer and employee turnover can be a challenging task for many organizations. In this case study, we will explore how Data Science Dojo (DSD) developed a customized email web application for a leading racing company to improve its knowledge management and communication processes.

## CHALLENGE

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The racing company faced the challenge of scattered knowledge transfer and employee turnover, which led to a lengthy process of accessing critical email data. They needed a solution to efficiently search and access email data to make informed decisions and actions quickly.

## SOLUTION

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We developed a searchable email web application that included a knowledge graph for complex search queries, filters, and facets to refine search results. Security features were implemented to ensure only authorized personnel have access to sensitive data. The app indexed over 60,000 emails by analyzing, preprocessing, and categorizing email content, metadata, and attachments from diverse email addresses and folders.



**Features provided in the webapp**

4

**Security Features implemented**

2

**Number of emails indexed**

60,000+

The project resulted in significant time savings and improved data visibility, enabling the client to make informed business decisions and optimize their operations. The creation of a fully functional data pipeline made data more accessible and easier to use. The client could now view data monthly instead of quarterly, resulting in time savings of approximately three months. The customized dashboards provided insights into various data sets, allowing the client to make informed business decisions and optimize their operations.

**CONCLUSION**

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The project streamlined data management, empowered data-driven decisions, and improved data visibility for the pharmaceutical client. With a comprehensive data pipeline and customized dashboards, it saved time and enabled informed business decisions, optimizing operations. Data Science Dojo's innovative approach and advanced data analysis techniques helped the client achieve digital transformation goals and stay competitive.

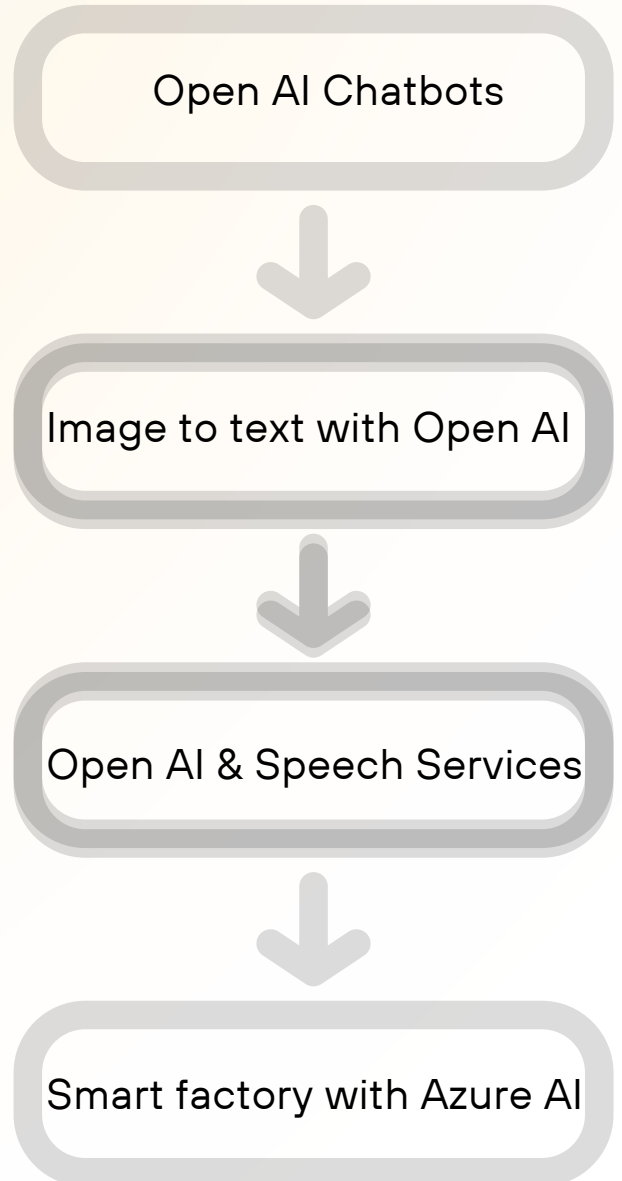
# 3. Generative AI Services

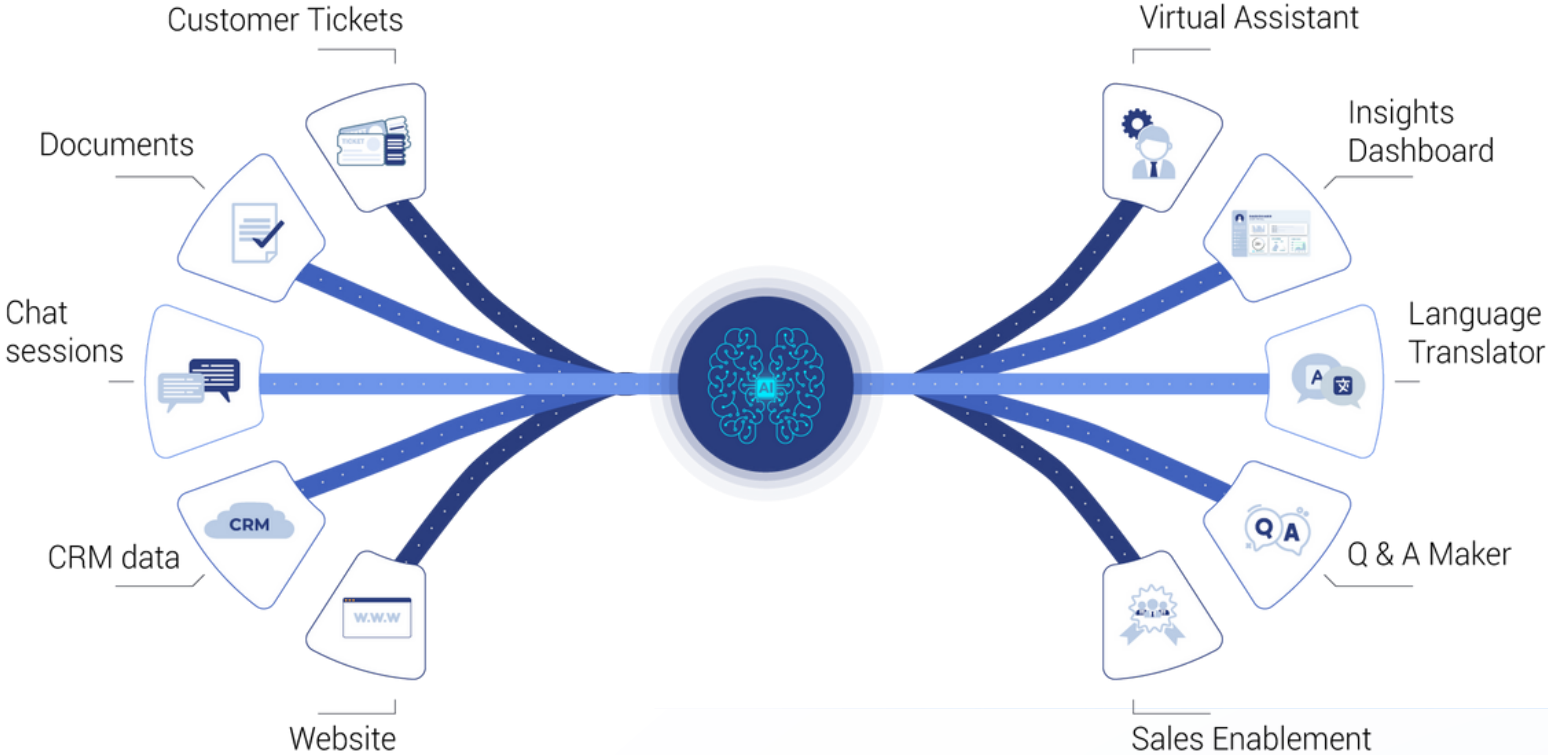
An overwhelming majority of global executives agree that AI foundation models will play a crucial role in their organization's strategies in the years to come. Generative AI, which underpins technology like Chat GPT, has also gained considerable attention and transformed the way businesses operate.

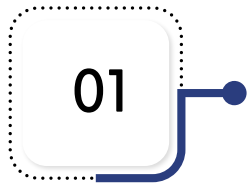
Fortunately, we can assist you in leveraging cutting-edge advancements in Generative AI to maximize its potential. Our team actively supports our clients in utilizing Generative AI to optimize their business processes and take their operations to the next level.

By incorporating the latest Generative AI technology, our experts can create custom solutions tailored to your brand's needs to accelerate your business and streamline your operations.

So, let our team of experts help you enhance your operations with the latest Generative AI technology and custom solutions that are designed specifically for your business

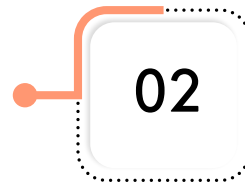






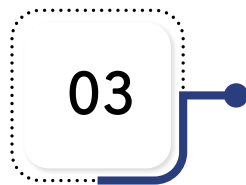
## AI Chatbot Development

Boost your business with our OpenAI Chatbots, empowered by training your data using natural language processing and machine learning.



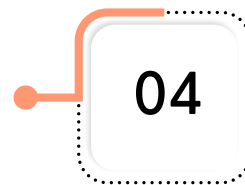
## Open AI Integration and Optimization Services

Our team of experts provides comprehensive solutions to incorporate OpenAI's language model into your workflows.



## Image to Text with Azure Open AI

We use the latest computer vision and natural language processing technologies to convert text in images into digital text with optical character recognition.



## Open AI with Speech services

Add speech recognition and synthesis capabilities to your applications with our services.

# **Related**

## Case Studies

# Insurance Case Study

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## Streamlining Client Support: Azure and OpenAI Transforming the Insurance Industry

### INTRODUCTION

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The insurance industry is facing a number of challenges, including the need to provide better customer service, the need to reduce costs, and the need to comply with regulations. Azure and OpenAI have partnered to develop a solution that can help insurance companies address these challenges.

### CHALLENGE

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The insurance company's client support process was inefficient and time-consuming. The company received a high volume of customer inquiries, which overwhelmed its manual customer support team. The customer support team often had to spend hours searching for answers to customer questions, which delayed the time it took to provide answers. The delays in providing answers frustrated customers and led to churn.

### SOLUTION

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The company partnered with Azure and OpenAI to develop a new client support solution that uses artificial intelligence to provide quick and accurate answers to customer questions. This has resulted in improved operational efficiency, as the company can now handle a larger volume of inquiries with the same or fewer resources.

**No. of company documents:**  
20,000

**Annual Revenue:**  
\$3.3B

## Improved operational efficiency

The project's focus on enhancing the client support process through automation and real-time information access has resulted in improved operational efficiency. By reducing manual efforts and providing quick responses, the insurance company can handle a larger volume of client inquiries with the same or fewer resources, driving cost savings and improving overall operational efficiency.

## CONCLUSION

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The impact of this streamlined approach has been remarkable. From empowering clients to making informed decisions, it has achieved exceptional outcomes. With our solution in place, the time previously spent on manual document searches has been significantly reduced, resulting in quick responses and saving hours of valuable time for both clients and support teams. This project sets a new standard in client assistance, redefining the way queries are handled and elevating the overall customer experience.

# Automotive Case Study

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## AI-Powered Personalized Ad Generator for Automotive Company

### INTRODUCTION

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The automotive industry is a highly competitive market, and companies are constantly looking for ways to improve their advertising capabilities. In recent years, artificial intelligence (AI) has emerged as a powerful tool that can be used to personalize advertising and improve customer engagement.

### CHALLENGE

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Traditionally, automotive companies have created advertisements manually. This process is time-consuming and labor-intensive, and it can be difficult to create ads that are relevant to each individual customer. AI can be used to automate the ad creation process and generate personalized ads that are more likely to resonate with customers.

### SOLUTION

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The AI-powered personalized ad generator for automotive companies was developed using the following technologies:

- Microsoft Florence: Florence is a computer vision project that can be used to extract text descriptions from images.



**Efficiency Boost:**

Significant reduction in ad creation time and resources

**Increased Engagement:**

Marked rise in customer engagement metrics

**Enhanced Relevance:**

Substantial improvement in ad relevance scores

- OpenAI chat models: OpenAI chat models are a type of AI that can generate text that is similar to human conversation.

The ad generator works by first using Florence to extract text descriptions from images. These descriptions are then used to train OpenAI chat models to generate personalized ads. The ads are generated in real-time, and they are tailored to each individual customer's interests.

**CONCLUSION**

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The AI-powered personalized ad generator for automotive companies has been successfully implemented by a number of companies. The results have been very positive, with companies reporting significant improvements in efficiency, customer engagement, and ad relevance. Overall, the AI-powered personalized ad generator for automotive companies is a powerful tool that can be used to improve advertising capabilities. It can save time and resources, improve customer engagement, and enhance ad relevance.

# Finance Case Study

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## Streamlining Client Support: Transforming Financial Inquiry Handling with Azure and OpenAI

### INTRODUCTION

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The financial industry is rapidly changing, and AI is becoming increasingly important for client support. AI can automate and personalize client support, freeing up human agents to focus on more complex tasks. This can lead to increased customer satisfaction and loyalty.

### CHALLENGE

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A leading financial organization is facing challenges in providing timely and accurate information to its clients. The organization's current client support process is manual and time-consuming, and it does not scale well as the organization grows. As a result, clients were left waiting for answers to their questions, and the organization is unable to provide the level of service that its clients expect.

### SOLUTION

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First, over 4,000 webpages were scraped from the client's website through web scraping. This process involved scraping various sources on the website, including FAQs and articles. The data collected was pre-processed and cleaned to remove any errors or inconsistencies. The data was also formatted in a way that was compatible with the AI model. A searchable index of the data was created so that the AI model could quickly find the information it needed.

**No. of webpages scraped:**

4000+

**Timeline for deployment of complete solution:**

06 weeks

The AI model was developed by training it on the data that had been collected and pre-processed. The model was trained to answer financial questions and provide recommendations. A user interface was developed that allowed users to interact with the AI model. The interface allowed users to ask questions and receive answers and recommendations from the model. The model was optimized for accuracy and performance by testing it on a variety of data sets and making adjustments as needed.

## CONCLUSION

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The project revolutionizes financial planning by leveraging advanced AI technology. It streamlines information delivery, empowering clients with accurate answers to financial questions and prompt-based interactions. This positions the company at the forefront of AI adoption, delivering efficient, personalized services, and staying competitive in the financial industry.

Additionally, by analyzing dynamically scraped content from various client sources, the project extracts valuable insights that revolutionize the way financial inquiries are addressed. It empowers the company to provide personalized and efficient support, enabling clients to make informed decisions and achieve impactful outcomes.



We understand that every client has unique needs, and we work closely with them to develop customized solutions that meet their objectives. With a team of experienced professionals and a commitment to quality and innovation, we are confident that we can drive growth and add innovation to your business.



# Contact Us



+1 (877) 360-3442



2205 152nd Ave NE Redmond, WA  
98052



[help@datasciencedojo.com](mailto:help@datasciencedojo.com)