# DevOps & Cloud

Timspark, 2024

# What is Timspark

A custom software development boutique with a special business model that ignites and fosters full-fledged development teams and inspires every engineer to deliver outstanding results.
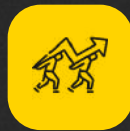
**Core Teams**

**Understanding of industry & business domain**

**High-quality teams with a proven expertise**

**Teams are highly motivated**

**Accountability and ownership within the teams**

# Quick facts

**30+**
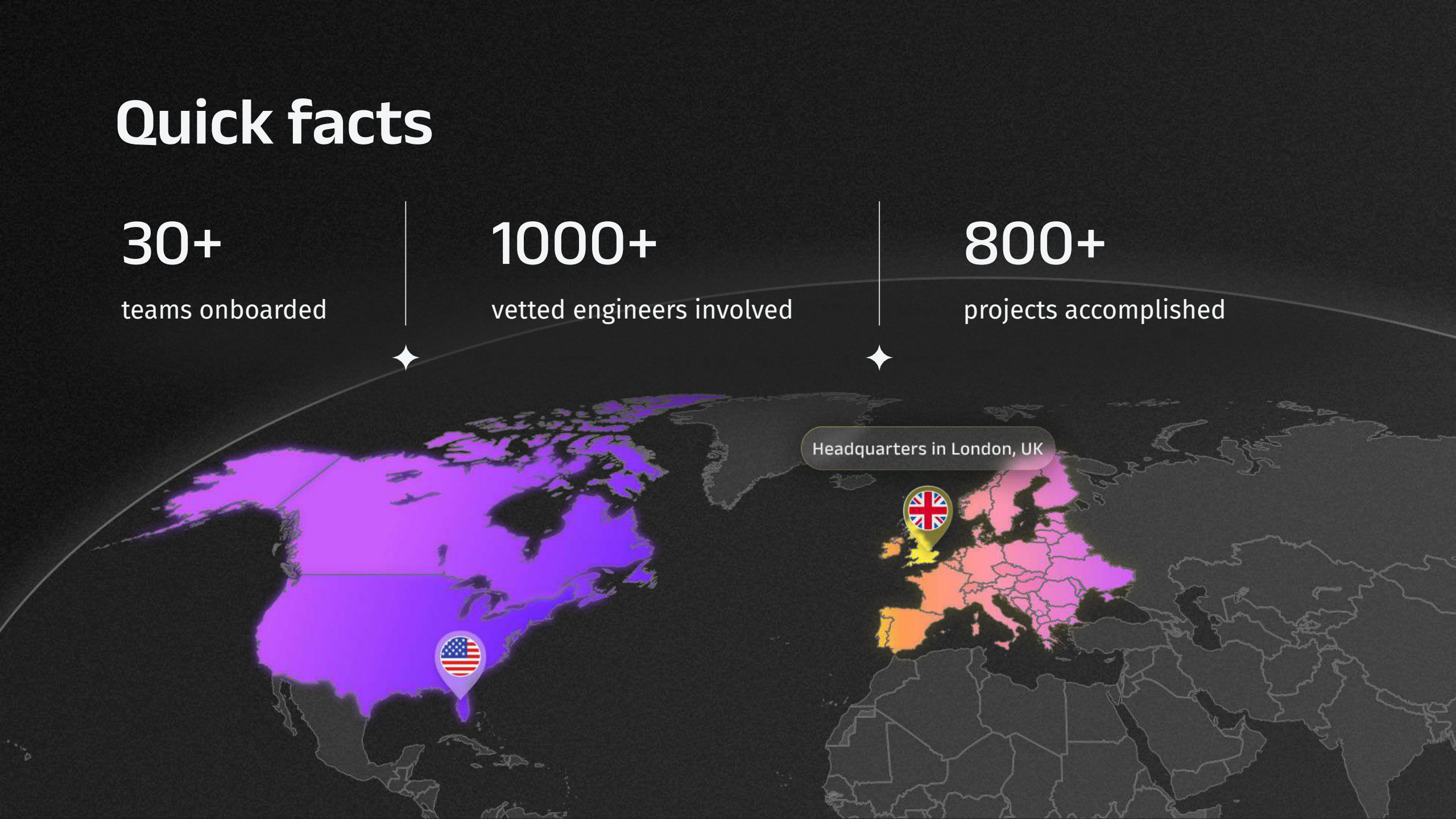
teams onboarded

**1000+**

vetted engineers involved

**800+**

projects accomplished

Headquarters in London, UK

# Key information

Certified development centers in

## Poland, Lithuania, Georgia

Headquarters in

## London, UK



Global 200+ client base covering following industries:

Finance · Banking · Healthcare · eCommerce · Education · Logistics · Transportation · Manufacturing

timspark

# How you can work with us

We are flexible. At Timspark, we offer different engagement models, from full-fledged teams to staff augmentation, to help you achieve your current business needs.

## Core Teams
Pre-built development teams with deep expertise

## Dedicated teams
Development units built specifically for your project

## Team augmentation
Skilled engineers to enhance your in-house team

# Technology stack

## BACK-END

- JAVA
- RUBY
- SOLIDITY
- PYTHON
- C/C++
- UNITY
- .NET/C#
- RUST
- UNREAL ENGINE
- NODE.JS
- COBOL
- ELIXIR
- PHP
- GO
- SCALA

## FRONT-END

- REACT
- Next.js
- ANGULAR
- VUE.JS
- JAVASCRIPT
- TYPESCRIPT

## MOBILE

- SWIFT
- KOTLIN
- FLUTTER
- REACT NATIVE
- XAMARIN, .NET MAUI

## PLATFORMS

- AWS
- AZURE
- CGP
- SAP
- SALESFORCE

# DevOps Unit Profile

**TEAM SIZE**
**70+**

Senior
**40%**

Middle
**40%**

Junior
**20%**

MATURITY

**INDUSTRIES**

Healthcare

Finance & Banking
Social communications
Healthcare
Transportation & Logistics
Telecommunication
HR/Recruitment
Education
Security
GameDev

**COMPLETED PROJECTS**
**40+**
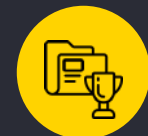
**CERTIFICATES**

+4

+2

aws   Azure   Google Cloud

**TECH VERTICALS**

DataOps   IoT   Marketplaces   Blockchain   +2

# DevOps service offering

**We can help to rollout your POC/startup-MVP**

To help roll out POC for example without hiring internal DevOps. Project-based cooperation

**Can help with NEW big project**

External consulting in cases where clients don't have appropriate expertise for the new challenge: compliance preparation, migration cases, move to the cloud (they have DevOps but without such experience). Project-based cooperation.

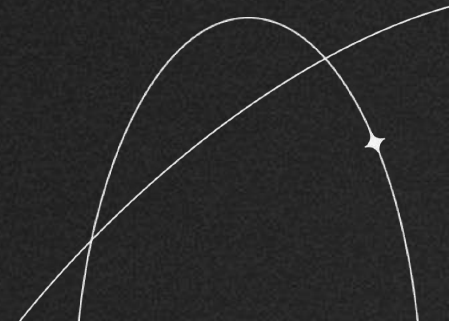**Boost/Implement clients security practices:**

- Security Hardening of current infrastructure and business processes
- Infrastructure Audit and Business Audit
- Security Testing

**Implementing DevOps**

Staff augmentation for teams/companies without DevOps practices. Long-term cooperation

**Boost client's DevOps team**

Expand clients' DevOps teams. Long-term cooperation

# Digital system for recruiting
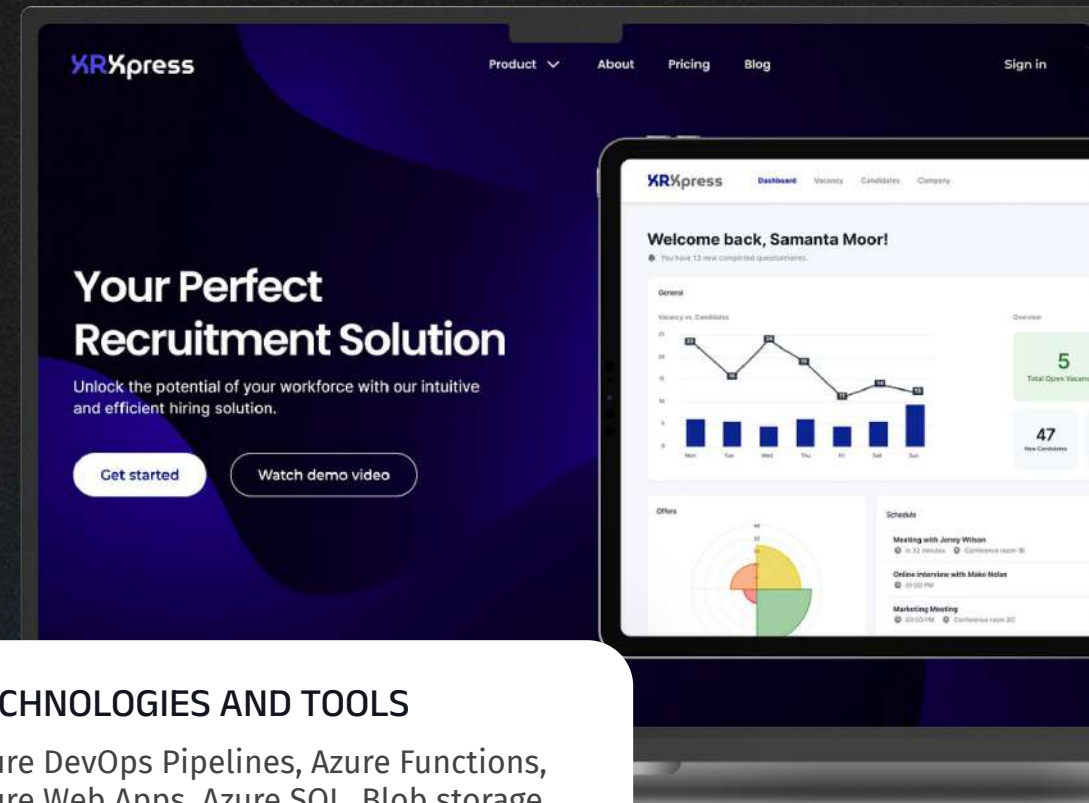
ERP  IOT  AUTOMOTIVE

**CHALLENGE**

The web platform for recruiters and a mobile app for candidates facilitate the employment process.

**SOLUTION**

The recruitment company was interested in expanding its bases of candidates and vacancies to provide the best fit for clients. Using Actonomy service, our team created a platform that combines information from different sites, facilitates searching, and job matching. Thanks to integrated service for sending SMS, HR specialists invite new candidates to install their mobile app. They use the app to create CVs, browse job opportunities, and like or dislike them by swiping right or left respectively. If users like some vacancies, the HR team gets push notifications and candidates become visible in the system for the next steps (shortlist, interview, etc.).

\* The image is illustrative. Project details cannot be disclosed due to the conditions of NDA between the Development Team and the Customer.

**TECHNOLOGIES AND TOOLS**

Azure DevOps Pipelines, Azure Functions, Azure Web Apps, Azure SQL, Blob storage, Notification Hub, Azure VM.

# Sales analytics platform
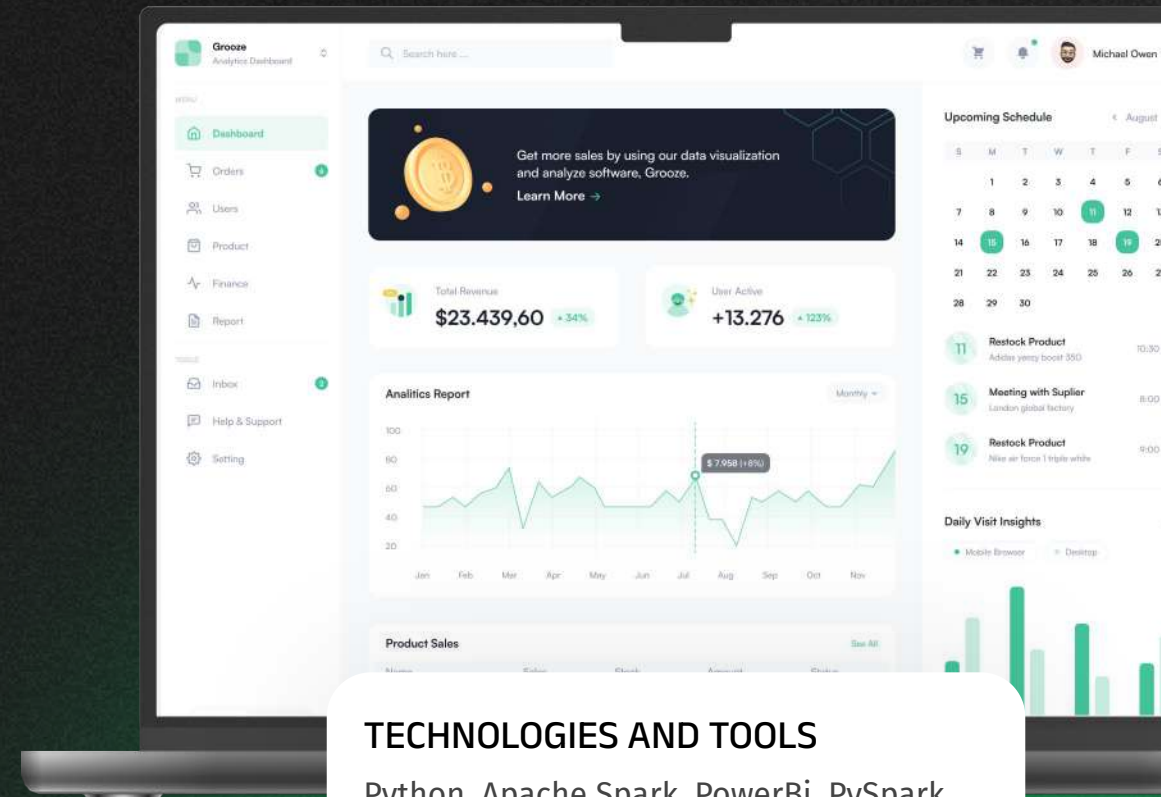
## ECOMMERCE

### CHALLENGE

The solution consists of the database and additional procedures that automate database filling and allow using the filled data for further analysis.

### SOLUTION

Tech specialists have developed a platform that gathers data chunks from various sources, purifies them, and transforms them into the needed format for further utilization. After that, the aggregated data is transferred to the OLAP database where it acquires its dimensions and hierarchical attributes. All the data is visualized via a fact chart.

After the data is processed by the platform, it becomes possible to promptly perform any data analysis activities and gather valuable insights on the market and customer behavior faster.

* The image is illustrative. Project details cannot be disclosed due to the conditions of NDA between the Development Team and the Customer.

## TECHNOLOGIES AND TOOLS

Python, Apache Spark, PowerBi, PySpark, Databricks, SQLserver, Azure, Data Lake, SSAS.

# Data design

PHARMACEUTICS

## CHALLENGE

Develop a data design project for a pharmaceutical company that allows the client to promptly receive the data from various sources and utilize it for desired purposes.

## SOLUTION

Timspark's data engineers were to design the pipelines for data streams from various sources. All the data chunks are managed through Denodo and are sent to data warehouses, from which business intelligence specialists analyze them via such tools as Tableau.

After the data gets to the data warehouse, it's visualized and sent in the vivid form to the client's specialists for analysis and further utilization.

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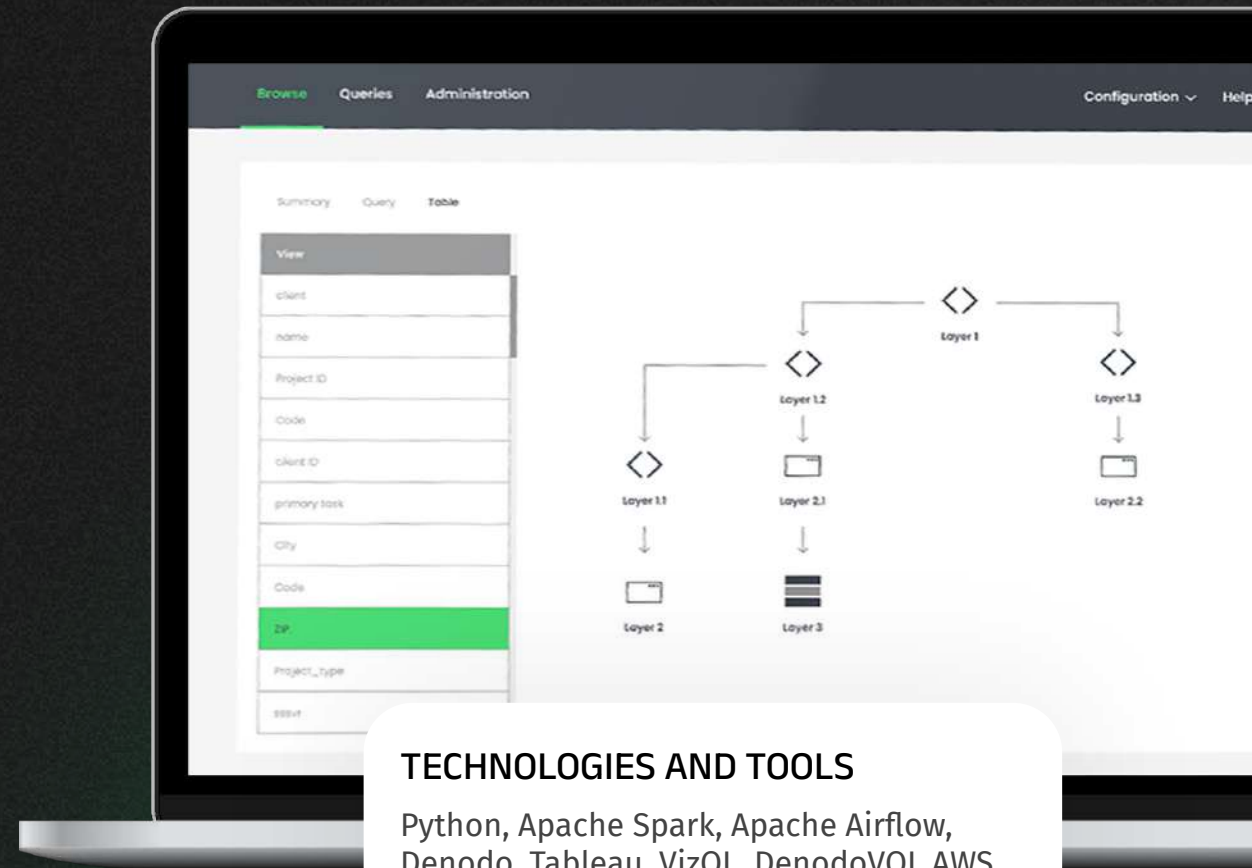
### TECHNOLOGIES AND TOOLS

Python, Apache Spark, Apache Airflow, Denodo, Tableau, VizQL, DenodoVQL AWS (S3, Lambda, Glue, Snowflake, Athena, RDS, DataBricks, Redshift, EC2).

# Data management tool



HEALTHCARE

## CHALLENGE

The application gathers and processes data from healthcare establishments and then creates a unified database for further use.

## SOLUTION

Our team was to develop the application for gathering and processing data from healthcare establishments from scratch. The solution gathers data according to the predetermined mapping of variables, takes into consideration the patients' and therapists' affiliation with a particular clinic, etc. This allows to swiftly gain access to any needed case or treatment program.

Also, through the solution users can easily visualize the overall structure and relationships between healthcare establishments since the application performs data mapping automatically.

\* The image is illustrative. Project details cannot be disclosed due to the conditions of NDA between the Development Team and the Customer.
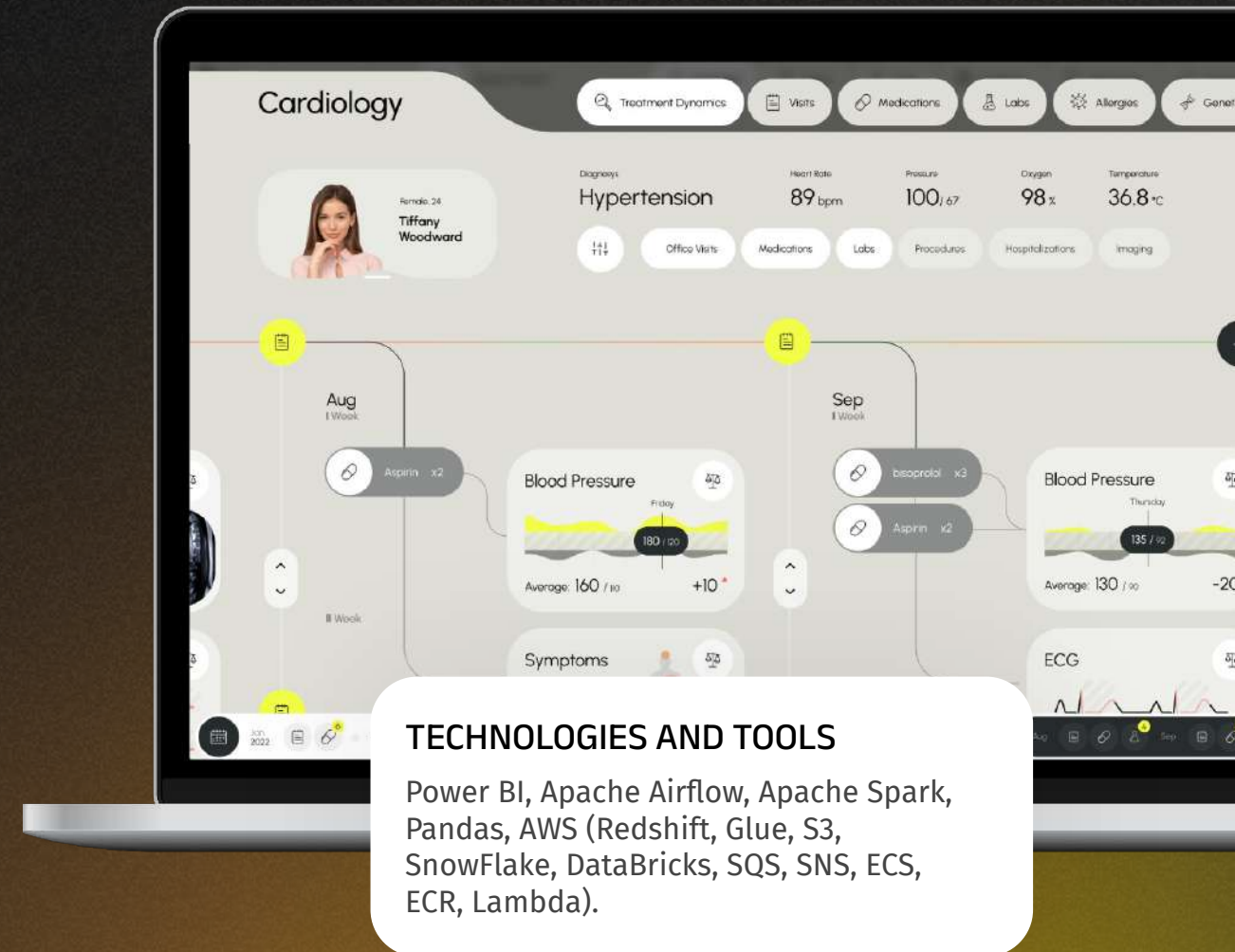
## TECHNOLOGIES AND TOOLS

Power BI, Apache Airflow, Apache Spark, Pandas, AWS (Redshift, Glue, S3, SnowFlake, DataBricks, SQS, SNS, ECS, ECR, Lambda).

# Cloud database improvement

### CHALLENGE

Create a solution that allows businesses to effectively aggregate, store, and analyze data via cloud-based services and tools.
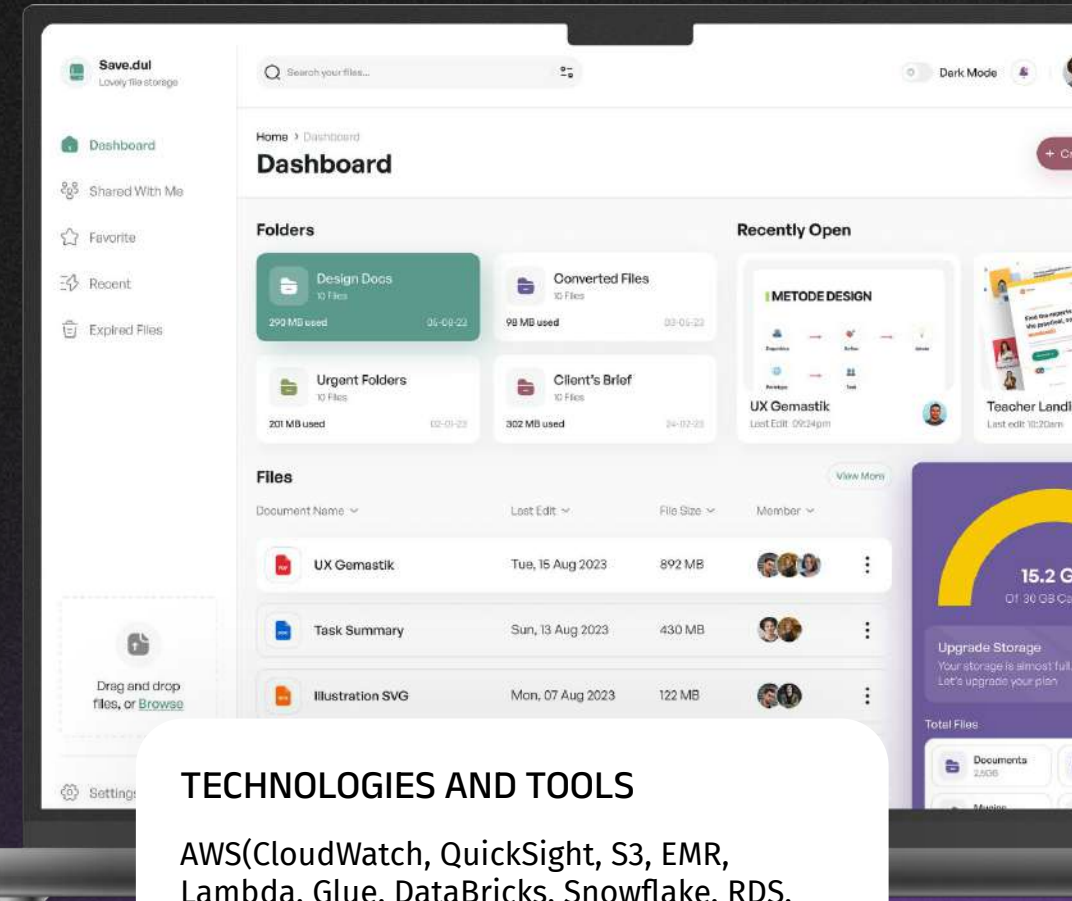
### SOLUTION

Software engineers have improved the existing cloud database with an array of features that allow our client to gather and manage incoming data chunks effectively in an automated way.

Our team is analyzing the AWS instances and logs on a daily basis as well as the in-database processes to provide the client with ways to optimize the solution's workflow.

The Team improved the speed and has made the data flow more effective in terms of aggregating and manipulating the gathered data chunks.

\* The image is illustrative. Project details cannot be disclosed due to the conditions of NDA between the Development Team and the Customer.



## TECHNOLOGIES AND TOOLS

AWS(CloudWatch, QuickSight, S3, EMR, Lambda, Glue, DataBricks, Snowflake, RDS, Redshift, Kinesis), MySQL, Python.

# Data flow design

## CHALLENGE

The solution is a data flow design that makes the data management more effective while remaining normalized.
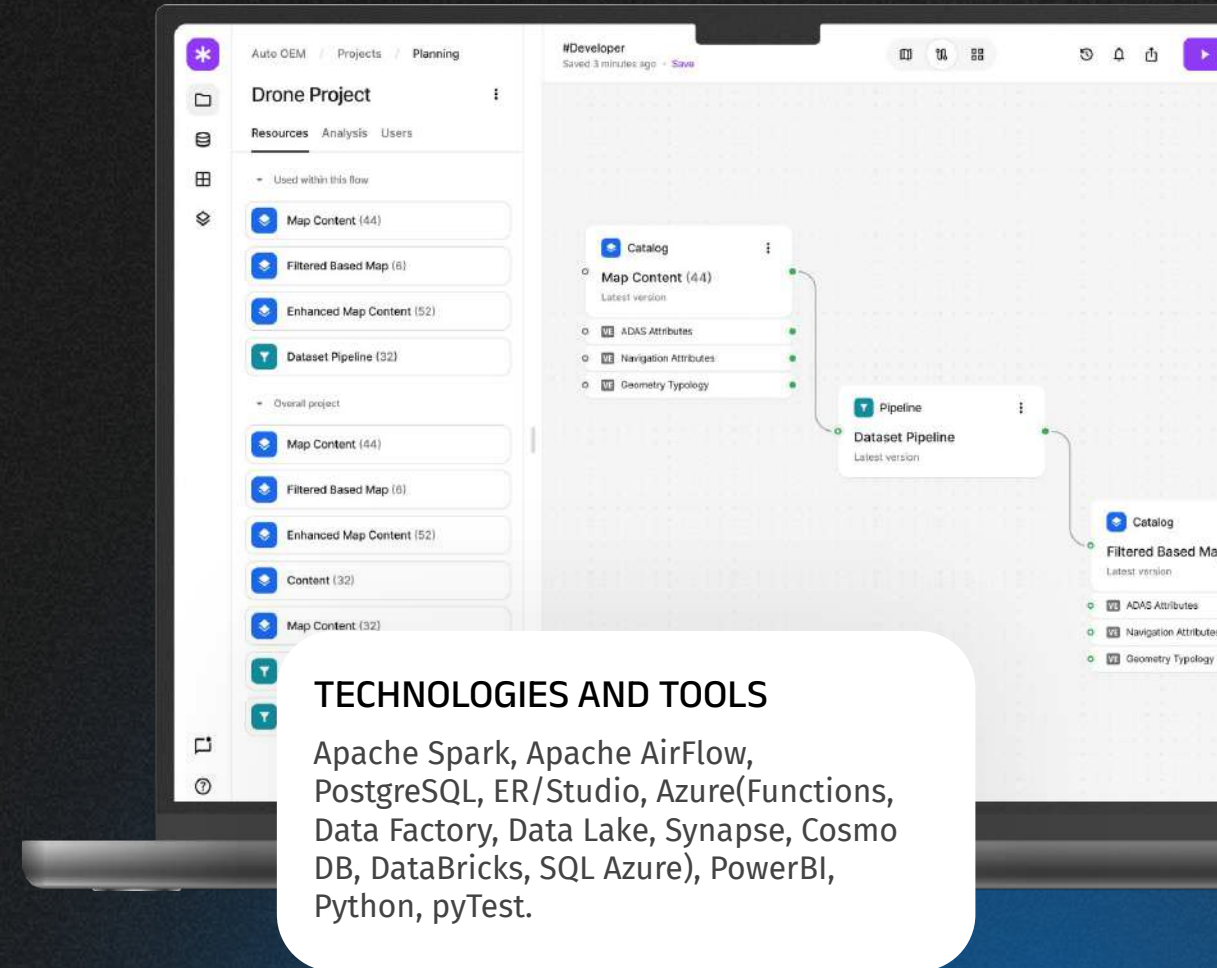
## SOLUTION

The Team has designed the whole database structure and data flow design to make the process of gathering and managing data swift and optimized. The incoming data passes the purification process and gets transferred to the database. From the database, the client's employees can request any needed data for further analysis.

The developed data flow model automatically gathers data from millions of users and constantly updates the database so that client's staff always had up-to-date information. For comfortable use, the solution presents the data in the vivid form of sheets or graphs.



### TECHNOLOGIES AND TOOLS

Apache Spark, Apache AirFlow, PostgreSQL, ER/Studio, Azure(Functions, Data Factory, Data Lake, Synapse, Cosmo DB, DataBricks, SQL Azure), PowerBI, Python, pyTest.

\* The image is illustrative. Project details cannot be disclosed due to the conditions of NDA between the Development Team and the Customer.

# Risk analysis API

FINTECH

## CHALLENGE

The solution allows a FinTech company to accumulate information about the client's credit score and latest loans for further assessment of non-return risks.

## SOLUTION

Timspark has built a solution that accumulates data about the client's recent loans and overall credit score. After that, the accumulated historical data is processed by ML algorithms to create forecasts about the particular client's capabilities of covering the requested loan conditions.

The data is gathered from various sources including public records and our client's history of interactions with the particular customer, put into a multi-layer data warehouse, and then analyzed by an array of data analytic tools integrated into the solution.
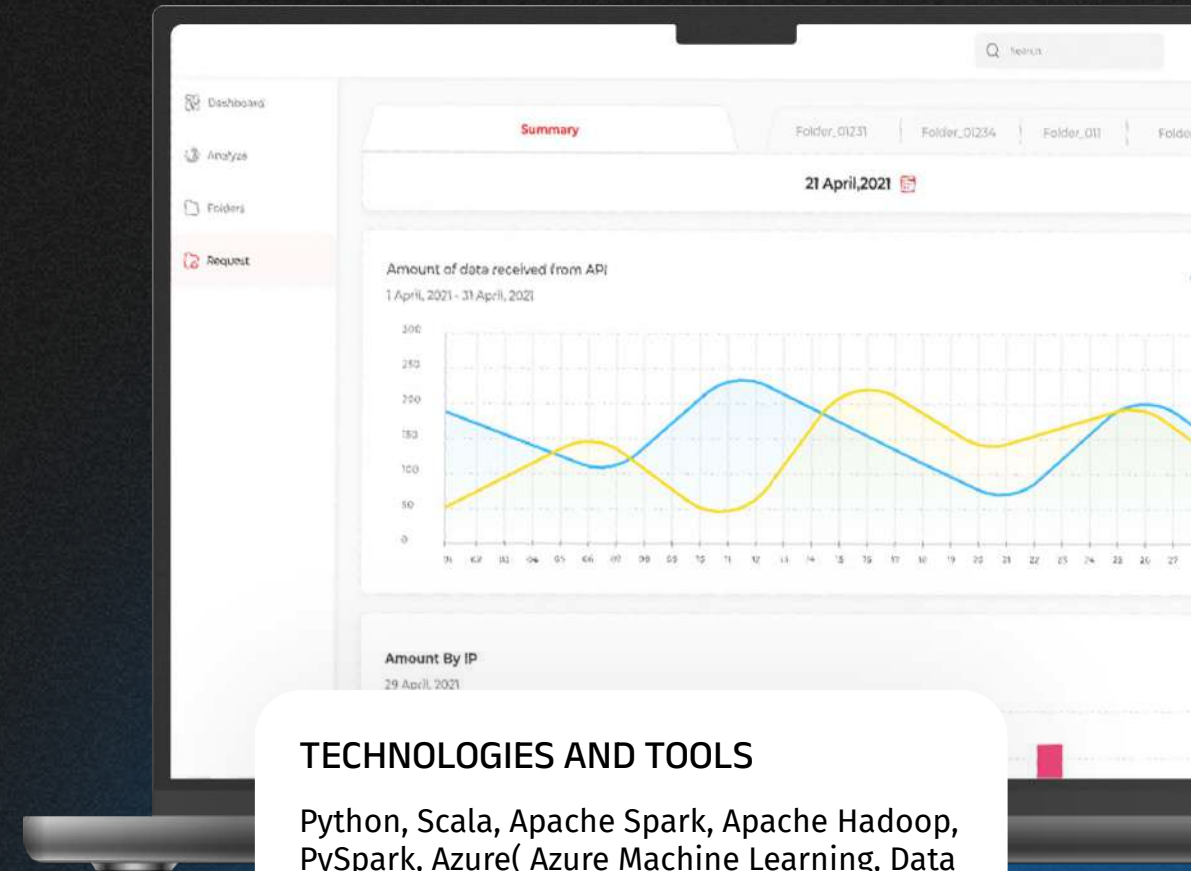
### TECHNOLOGIES AND TOOLS

Python, Scala, Apache Spark, Apache Hadoop, PySpark, Azure( Azure Machine Learning, Data Lake, Data Factory, Synapse), PowerBI.

# Executive search tool
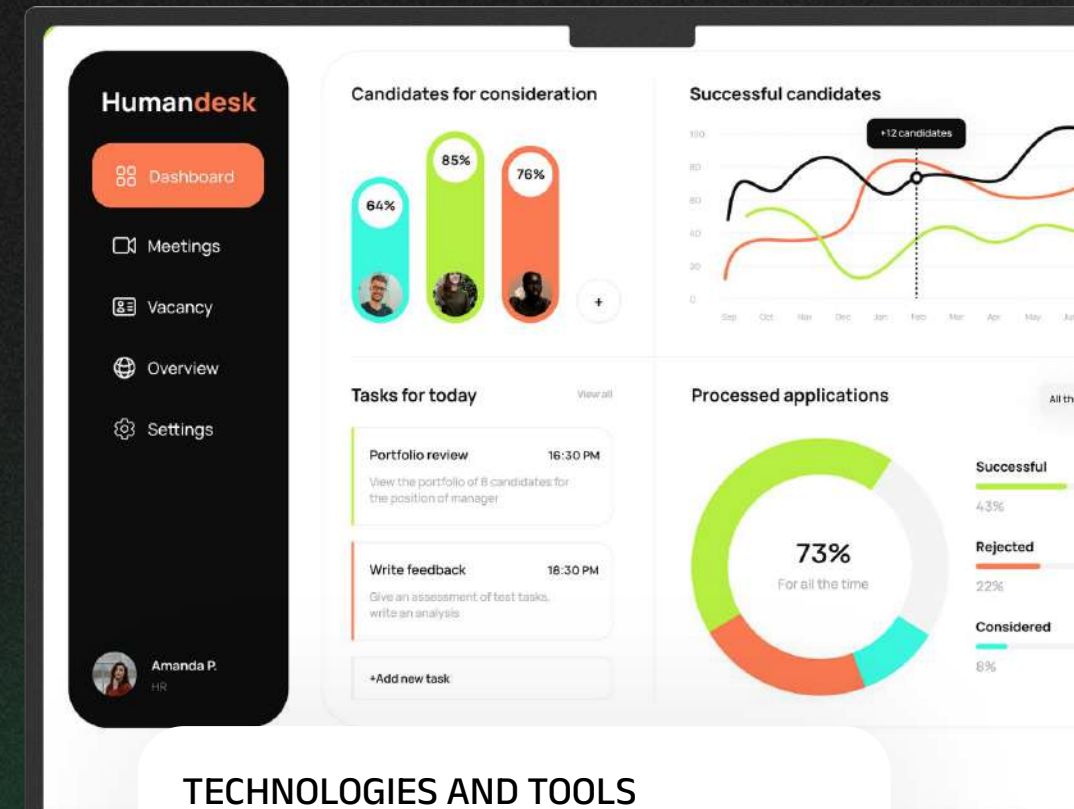
**HR** **RECRUITING**

### CHALLENGE

The platform allows users to perform a comprehensive analysis of various candidates for an executive position and pick the most suitable ones based on various parameters.

### SOLUTION

The Team has built the tool for analyzing the profiles of candidates for an executive position dragging data from various sources like social networks or overall mentions on the Internet.

The solution gathers all the intel about the particular candidate, analyzes it with the help of various tools, and visualizes it in the client's dashboard with the approximate evaluation of the candidate's suitability for the position.

The platform allows to access the found data and analytics results manually from the dashboard.

*The image is illustrative. Project details cannot be disclosed due to the conditions of NDA between the Development Team and the Customer.



## TECHNOLOGIES AND TOOLS

Python, MongoDB, MySQL, AWS (S3, Lambda, SNS, FIFO SQS), Power BI, Apache Spark, Apache Airflow, Apache Hadoop, PySpark.

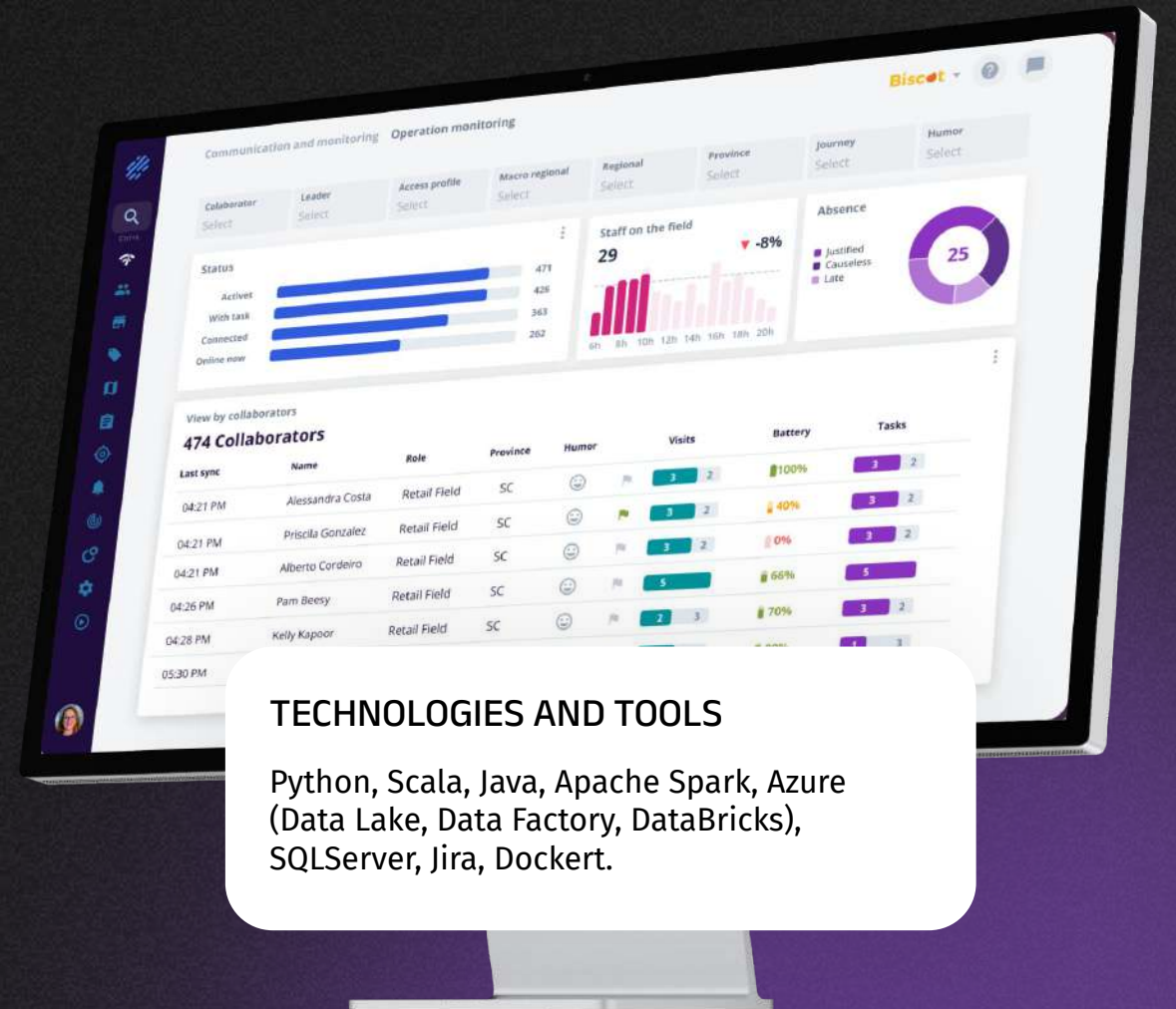# Staff monitoring platform

( HR ) ( SECURITY )

## CHALLENGE

Create a solution that allows managers to analyze their subordinates' performance and activity in real time and perform analysis of recorded data.

## SOLUTION

Engineers have created the database optimized for gathering staff activity information from various sources like a corporate website, staff mobile application, mail server, and RFID readers.

The platform gathers information from employees' user accounts, tracks their presence or absence in the office from RFID readers, and creates vivid statistics on the department or particular employee's performance and activity for further use by managers.

The Team has optimized the data flow to avoid the solution's performance losses while performing multiple tasks.

* The image is illustrative. Project details cannot be disclosed due to the conditions of NDA between the Development Team and the Customer.

### TECHNOLOGIES AND TOOLS

Python, Scala, Java, Apache Spark, Azure (Data Lake, Data Factory, DataBricks), SQLServer, Jira, Dockert.

# Introducing Cloud

We have been rendering top-notch cloud solutions that bring solid profits and reduce operational costs since 2007. We guide customers through the project pipeline, delivering outcomes on every SDLC stage.

**16**
years
of experience

**77**
cloud
specialists

**40+**
projects
delivered

**31**
official cloud
certificates

Discovery and planning

Architecture design preparation

Design and development

QA and testing

Support and maintenance

# Our Cloud expertise

✦ Cloud integration services

✦ Cloud migration services

✦ Cloud app development

✦ Cloud-based SaaS development

✦ Cloud computing architecture

✦ Cloud app containerization

✦ Cloud infrastructure management

✦ Cloud support and maintenance

✦ Cloud document management

✦ Cloud microservices architecture

✦ Cloud security services

✦ Cloud backup services

# Cloud technology stack

## Clouds

Amazon Web Services, Microsoft Azure, Google Cloud Platform, DigitalOcean.

## Databases / data storages

SQL (Microsoft SQL Server, MySQL, Oracle, PostgreSQL), NoSQL (Apache Cassandra, Apache Hive, Apache HBase, Apache NiFi, MongoDB.

## Back-end

Java, .NET, Python, Node.js, PHP, Unity, Go, Ruby, Rust, C/C++, Unreal Engine, Cobol.

## Cloud databases and warehouses

AWS (Amazon S3, Amazon Redshift, Amazon DynamoDB, Amazon DocumentDB, Amazon Relational Database Service, Amazon ElastiCache), GCP (Google Cloud SQL, Google Cloud Datastore), Azure (Azure Data Lake, Azure Blob Storage, Azure Cosmos DB, Azure SQL Database, Azure Synapse Analytics, Kinect DK, Azure RTOS.

## Real-time data processing

RabbitMQ, Flink, Apache Spark Streaming, Apache Storm, Apache Kafka Streams, Amazon Kinesis, Azure Event Hubs, Azure Stream Analytics.

# Introducing GCP

**Having a pool of vetted GCP specialists, we help businesses innovate faster through adopting cloud capabilities.**

## We provide:

— Google Cloud Platform administration
— GCP development
— GCP integration
— GCP migration
— GCP cost management
— Google cloud database services
— Google cloud IoT
— Google cloud support & maintenance

| | |
|---|---|
| GCP cloud engineers | 6 |
| GCP architects | 2 |
| GCP infrastructure engineers | 6 |

Google Cloud
Essential Google Cloud Infrastructure: Foundation
COMPLETION BADGE

Google Cloud
Google Cloud Fundamentals: Core Infrastructure
COMPLETION BADGE

# Intellectual property protection platform

PR    LEGAL

## CHALLENGE

The solution is a data analytics platform that allows brands to monitor their mentions on the web and check them according to compliance guidelines.

## SOLUTION

Timspark's data engineers have developed   a unique data collection and management tool that allows swift analysis of brand mentions on such marketplaces as eBay, Amazon, etc.

Brands can track the products and intellectual property mentioned on the web and from partner sources and check whether the mentions comply with the intellectual property protection laws and compliance guidelines to take further actions if needed.

\* The image is illustrative. Project details cannot be disclosed due to the
   conditions of NDA between the Development Team and the Customer.
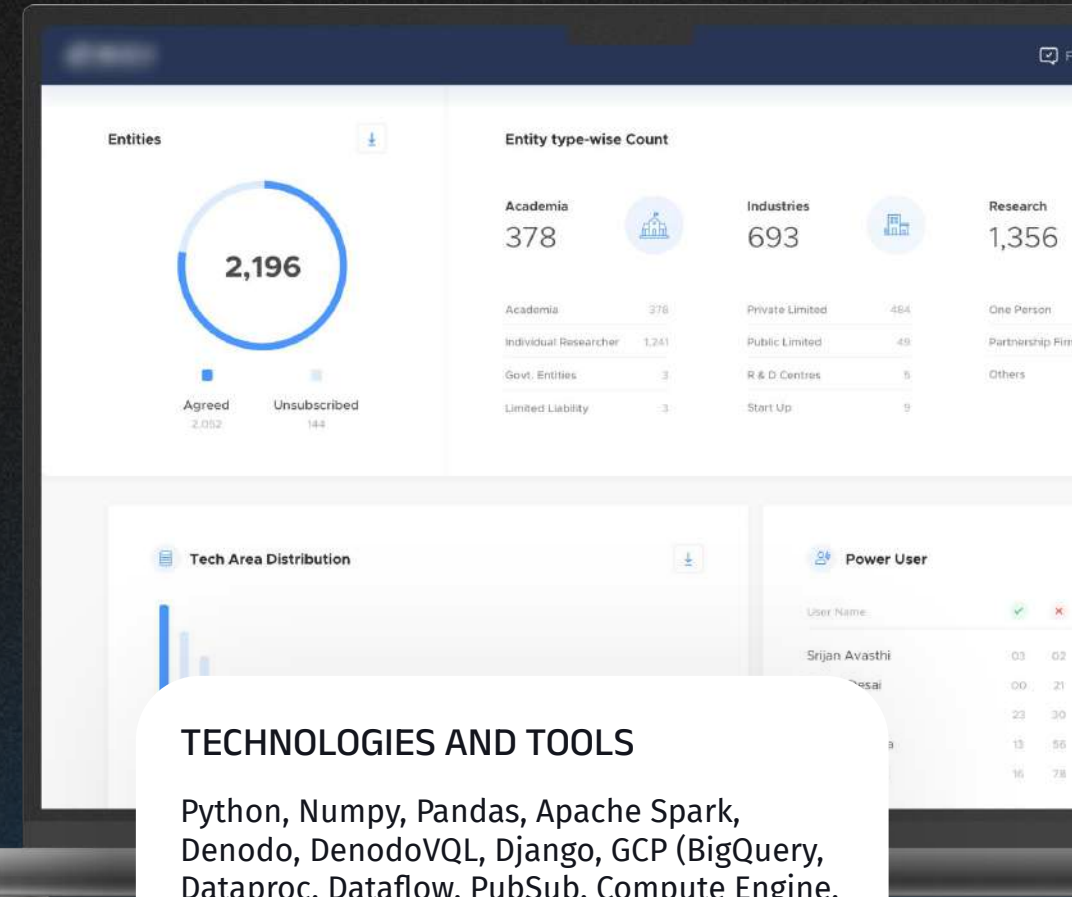


### TECHNOLOGIES AND TOOLS

Python, Numpy, Pandas, Apache Spark, Denodo, DenodoVQL, Django, GCP (BigQuery, Dataproc, Dataflow, PubSub, Compute Engine, Cloud SQL, Cloud Storage, Cloud Run, Looker, Dataprep), AWS, MySQL, Clickhouse, Apache Cassandra.

# Marketing costs optimization tool

### CHALLENGE

The platform allows game developers to observe their marketing expenses and optimize them with the help of various data analytics tools.

### SOLUTION

Timspark has developed a solution that accumulates, analyzes, and visualizes the information about how much game development companies spend on marketing activities and how effective it is.

Users can view their expenses and the metrics related to them in the application. After data analysis, the solution performs forecasting of possible results according to known expenses. Users can alter several variables and see how the forecast changes and optimize their marketing budget according to the received data.
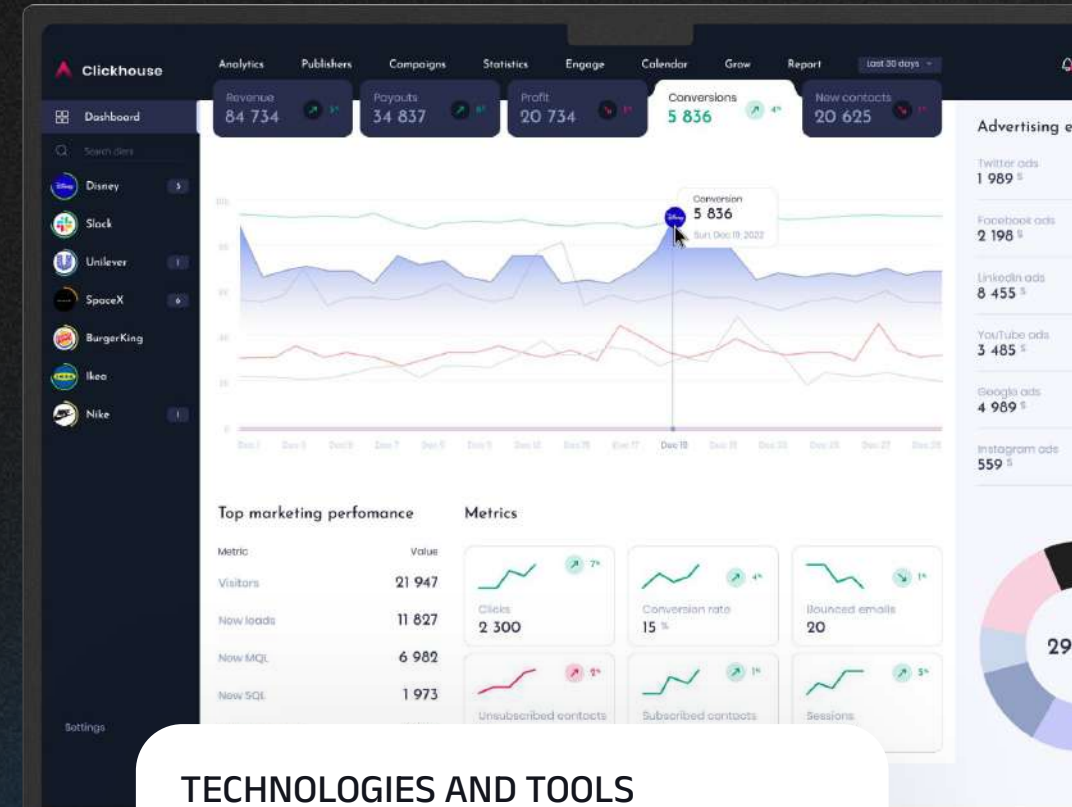


## TECHNOLOGIES AND TOOLS

Python, NumPy, Pandas, Django, Angular, Celery, GCP(BigQuery, BigTable, Dataflow, Looker, Cloud Storage), Power BI.

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# Introducing AWS

Having a pool of skilled AWS specialists with 19 certificates, we help customers migrate to the cloud and benefit from distributed software infrastructure.

### We provide:

— AWS-based application development
— AWS infrastructure monitoring
— AWS administration and support
— AWS serverless services
— Data warehouse on AWS
— AWS integration
— AWS migration
— AWS consulting
— AWS cost optimization
— AWS security and compliance
— AWS implementation
— AWS DevOps

| | |
|---|---|
| AWS-certified solutions architects | 6 |
| AWS DevOps engineers | 14 |
| AWS consultants | 14 |

# AI-based big data analytics system

MACHINE LEARNING    DATA SCIENCE

### CHALLENGE

The AI-based operating system that unifies and analyzes business data.

### SOLUTION

The project aimed to refine a platform that allows companies to conduct a full cycle of their affairs and gathers, analyzes, and visualizes various business data. The operating system unifies all the data coming from different sources, sorts it into multiple categories, and analyzes it with the help of ML algorithms. From market analysis to threat intelligence, it enhances various businesses with more efficient data-based decision-making.

Our team was responsible for the project architecture and database design, developing microservices and system asynchronous parts.

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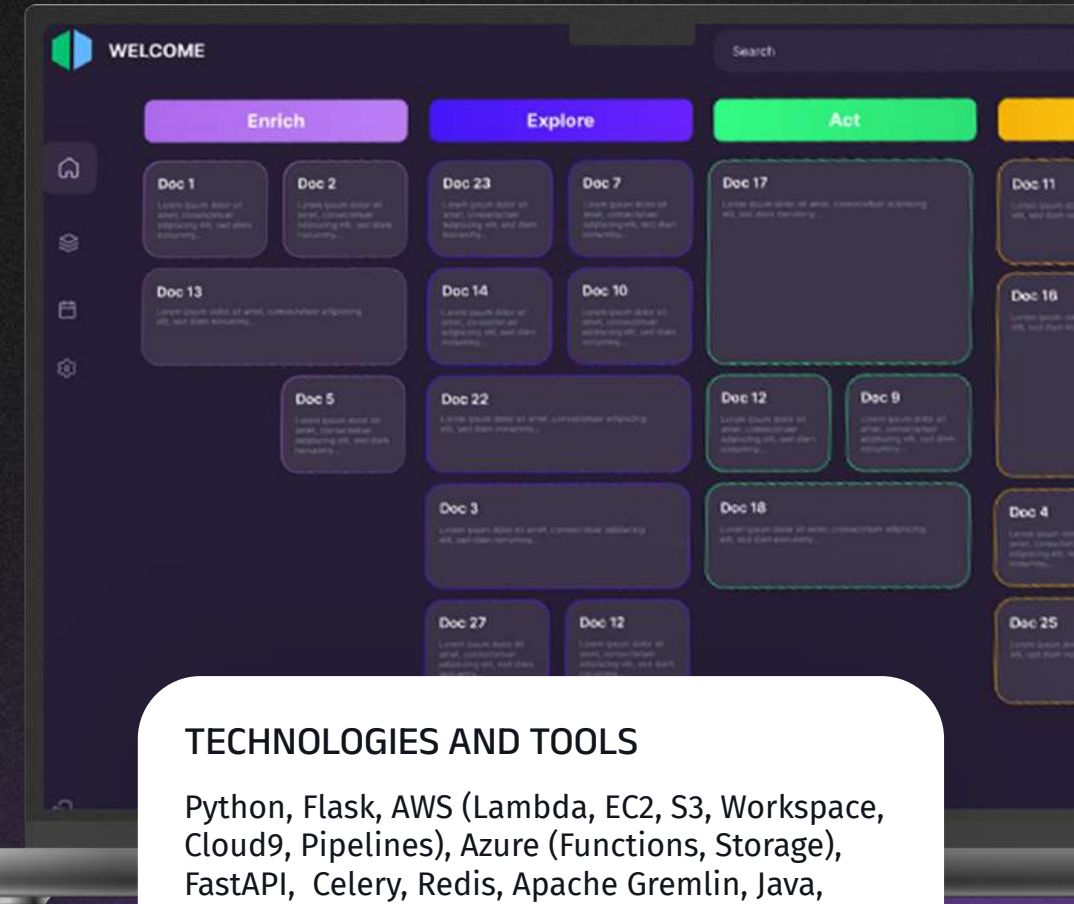
## TECHNOLOGIES AND TOOLS

Python, Flask, AWS (Lambda, EC2, S3, Workspace, Cloud9, Pipelines), Azure (Functions, Storage), FastAPI,  Celery, Redis, Apache Gremlin, Java, MySQL, MongoDB, MariaDB, Websockets, Pydantic, SQLAlchemy, Alembic, Docker, Docker Compose, REST, GraphQL.

# Web platform for merchant services

FINTECH    E-COMMERCE    BANKING

## CHALLENGE

A web platform that is aimed at streamlining merchant services.

## SOLUTION

The primary purpose of our client was to deliver and continuously improve merchant services to their corporate clients. The first opportunity stemmed from the client's lack of business analytical tools. The second area where merchant services could be improved was related to ACH.

To more effectively retain existing customers and attract new ones, we have developed a web platform that would exploit the opportunities created by these improvement areas. It analyses raw transactional data and generates custom reports to provide business clients with trends, observations, and valuable insights. Another part of the platform automates creating NACHA compliant files for ACH payments taking into account all instructions and preventing human errors.

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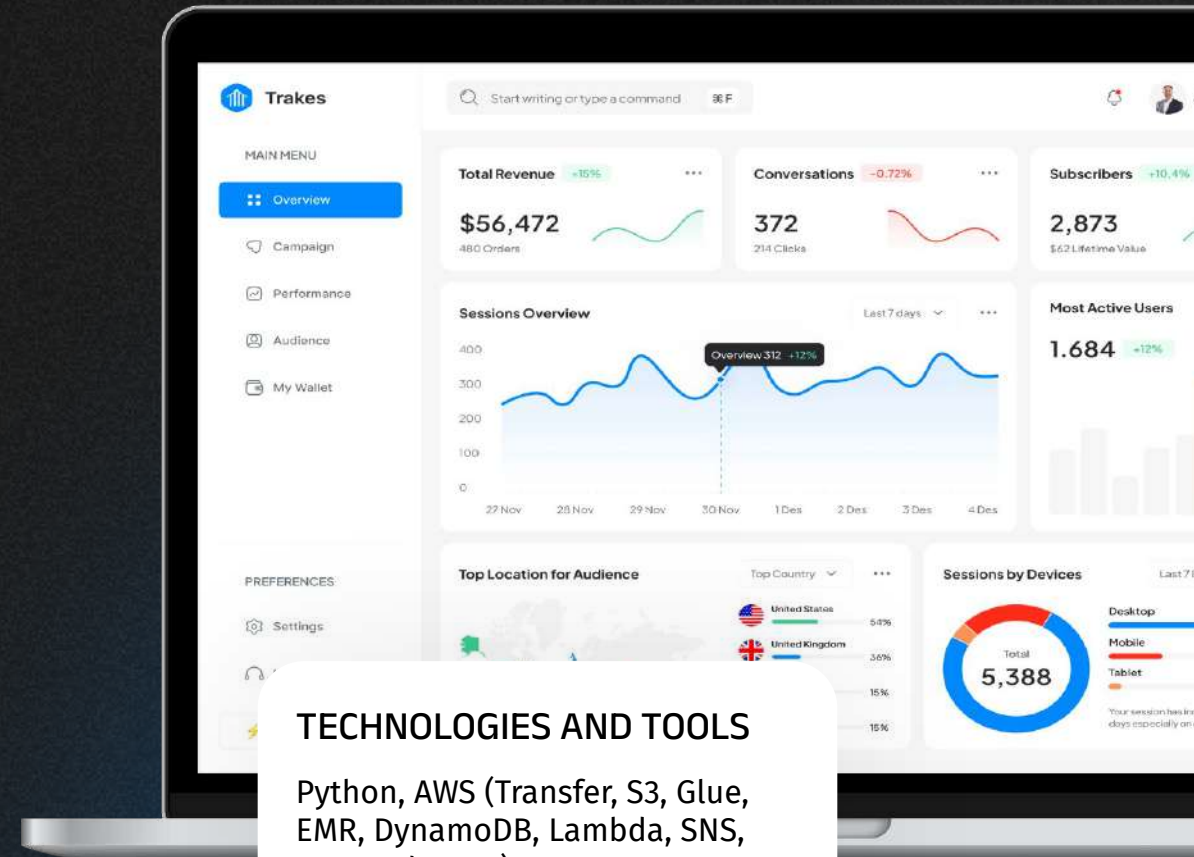


**TECHNOLOGIES AND TOOLS**

Python, AWS (Transfer, S3, Glue, EMR, DynamoDB, Lambda, SNS, SQS and more).

# Online events streaming platform
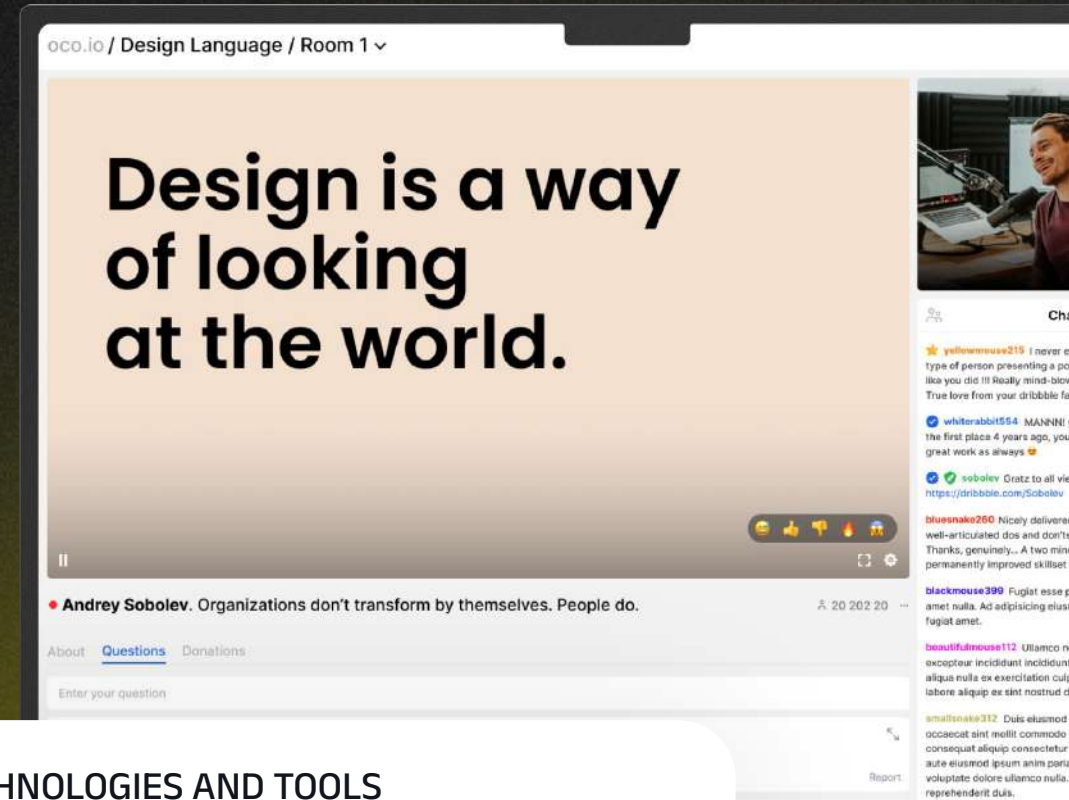
ENTERTAINMENT    COMMUNICATION

## CHALLENGE

A streaming platform for organizing and holding interactive events online.

## SOLUTION

To make streaming more interactive, we added chats and possibility to create and conduct various polls. Since most of events are paid (or may be accessed by promo codes), our team integrated Stripe payment service. The platform allows sponsors to create stands where participants can find out information about them. Organisers of events have real-time statistics about participants, their interests (pages or stands that they visited), and can check whether a particular user is online. So we managed to create a functional platform that allows almost the same activities as offline events.

\* The image is illustrative. Project details cannot be disclosed due to the conditions of NDA between the Development Team and the Customer.



oco.io / Design Language / Room 1

Design is a way of looking at the world.

Andrey Sobolev. Organizations don't transform by themselves. People do.

About    Questions    Donations

Enter your question

## TECHNOLOGIES AND TOOLS

Python, FastAPI (microservices), Django / DRF (microservices), Kafka, PostgreSQL, Kubernetes, Docker, Docker Compose, Redis, OAuth2, Stripe, AWS (EC2, DynamoDB, Lambda functions, API Gateway, Event Bridge, RDS, S3), Websockets, Pytest.

# SMM statistics management tool

SOCIAL MEDIA

## CHALLENGE

The solution is a data management tool that gathers the statistics of the bloggers' social networks, processes and visualizes them for further use.

## SOLUTION

The team was to create the solution and design the data flow to be operated and visualized via the application.

The solution gathers the data from bloggers' social networks, processes it into visual form, and sends it back to bloggers. From it, they can see the community activity over time, gather statistics on the most and least active posts, etc.

The solution is based on AWS, data operations are performed via Apache Spark.
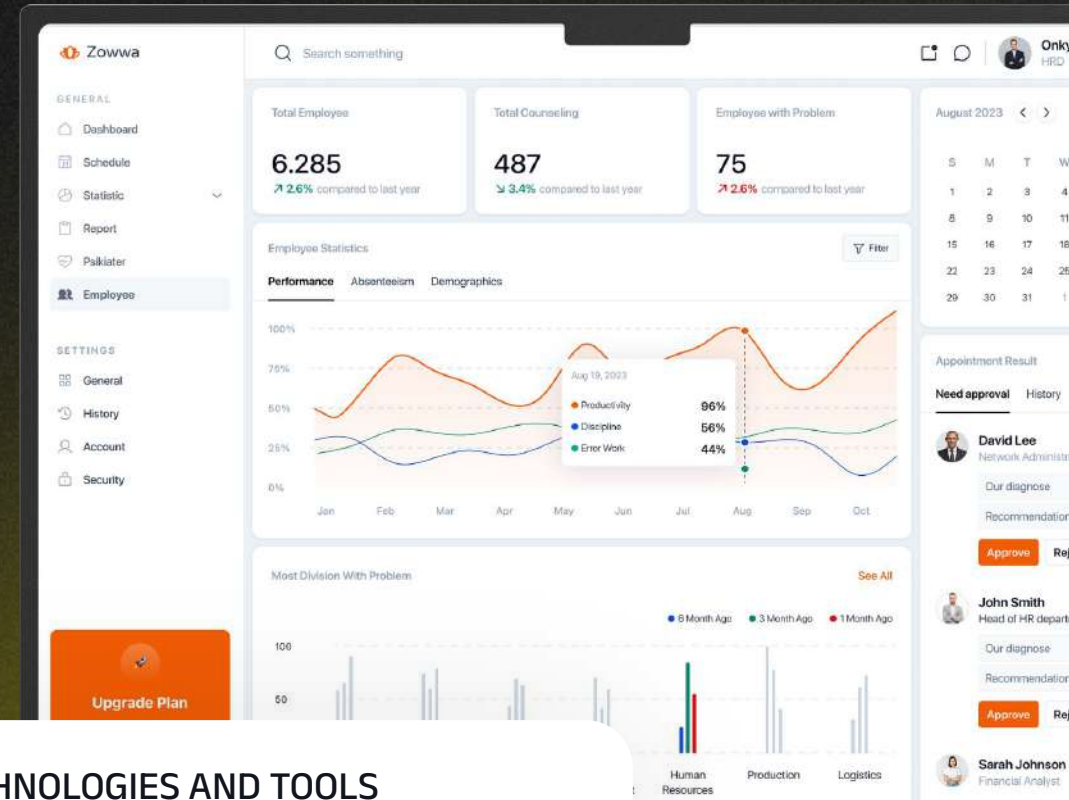


## TECHNOLOGIES AND TOOLS

Python, AWS (CloudWatch, QuickSight, SQS, SNS, EMR, Lambda, Glue, Snowflake, Athena, RDS, DataBricks,), Apache Spark, PHP.

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# Introducing Azure

With 10 Azure certificates, Timspark's upscale professionals assist clients with digital transformation.

## We provide:

— Azure cloud solutions development
— Azure migration services
— Azure administration
— Azure cybersecurity
— Azure performance monitoring
— Azure Microsoft support
— Azure serverless computing services
— Azure cost management

| | |
|---|---|
| Certified Microsoft Azure engineers | 6 |
| Certified Microsoft Azure solutions architects | 2 |
| Microsoft Azure consultants | 6 |
| Microsoft Azure DevOps engineers | 15 |

# Digital system for recruiting
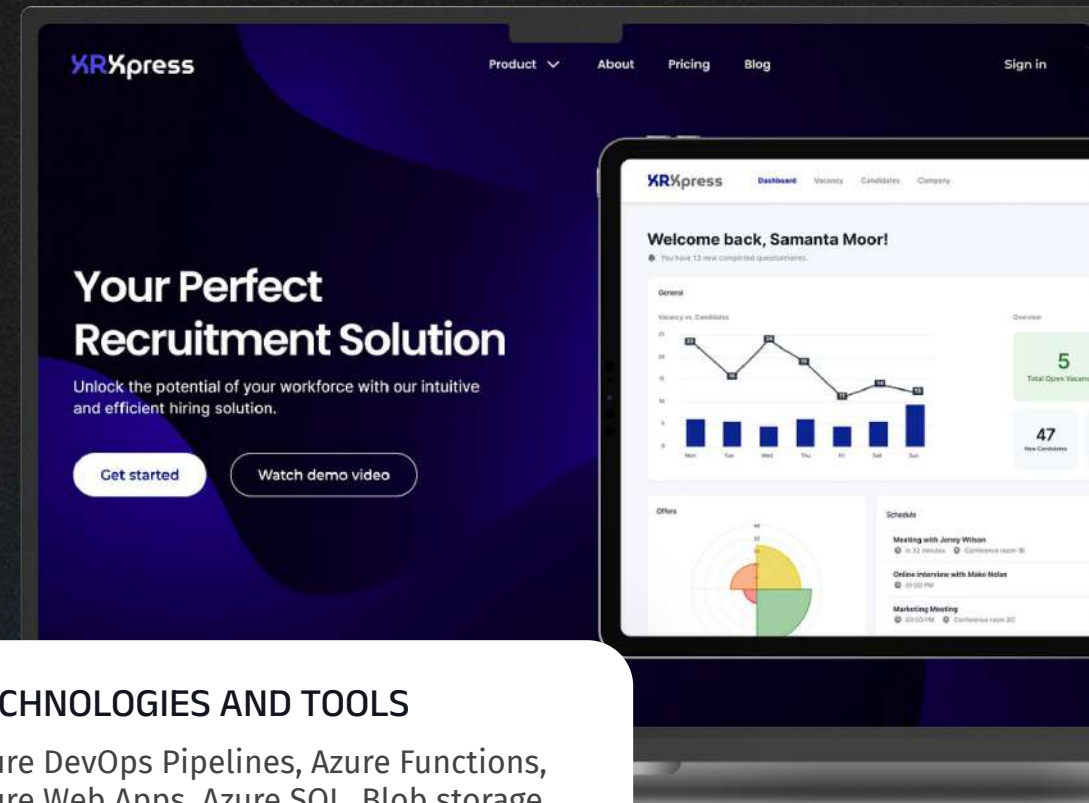
ERP    IOT    AUTOMOTIVE

## CHALLENGE

The web platform for recruiters and a mobile app for candidates facilitate the employment process.

## SOLUTION

The recruitment company was interested in expanding its bases of candidates and vacancies to provide the best fit for clients. Using Actonomy service, our team created a platform that combines information from different sites, facilitates searching, and job matching. Thanks to integrated service for sending SMS, HR specialists invite new candidates to install their mobile app. They use the app to create CVs, browse job opportunities, and like or dislike them by swiping right or left respectively. If users like some vacancies, the HR team gets push notifications and candidates become visible in the system for the next steps (shortlist, interview, etc.).

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### TECHNOLOGIES AND TOOLS

Azure DevOps Pipelines, Azure Functions, Azure Web Apps, Azure SQL, Blob storage, Notification Hub, Azure VM.

# Fleet management system

( ERP )  ( IOT )  ( AUTOMOTIVE )

## CHALLENGE

The system allows dealers to manage their fleet and control vehicles in real time.

## SOLUTION

A car dealership uses a software which receives telemetry transmitting data on the state and location of vehicles. Our goal was to create an Azure infrastructure, receive data via Azure IoT system and analyze it based on critical values, which can be further used in web and mobile apps. With their help, managers track current data on battery charge level, fuel, speed, mileage, RPM, etc. The portal allows creating rules for push notifications of some events: when a driver leaves a specified geozone or exceeds the speed-limit during test drive, if a car will run out of fuel soon, etc. Thus the solution helps both to organize workflow more efficiently and to improve customer service.

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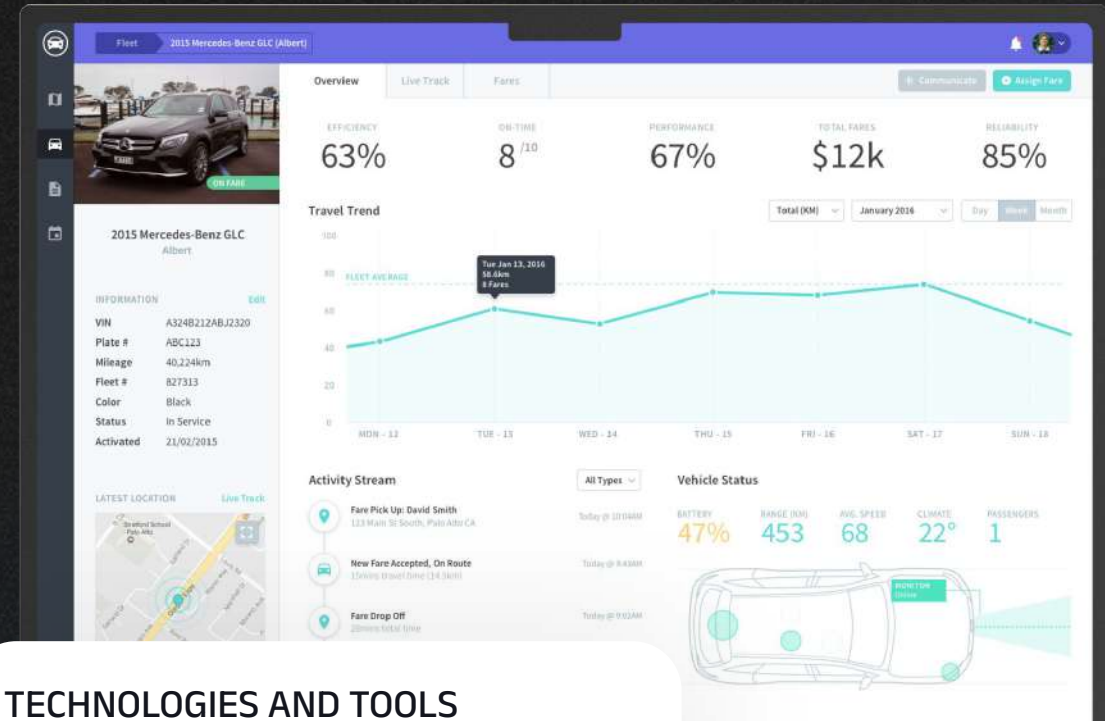
### TECHNOLOGIES AND TOOLS

Azure IoT Hub, Azure Event Hub, ASP.NET Core MVC, Entity Framework, Google Protobuf, Azure Storage, Azure Tables, Azure Queue, Azure Blobs, MS SQL, Reddis.

# Keen to **explore** this further?

Let's discuss your requirements and come up with a tailored solution!

At Timspark, we intend to bring value and competitive advantage to our clients. Our dedicated teams can help you achieve your goals and add value to your offerings.

**REACH OUT**

**Julietta Kasparova**

Relationship Manager

✉ julietta.kasparova@timspark.com