

CASE STUDY: WORLD'S FIRST IoT-ENABLED CHAI-MAKER



CLIENT PROFILE

A Food-Tech Company based in Gurgaon, India, "Hi Arya," the client wanted to invent a robotic tea-maker which could make a perfect cup of tea via a user's customized recipes using voice commands.

CLIENT REQUIREMENTS

The company required to build a robotic tea maker, which uses fresh ingredients and a custom recipe to give an experience of home-made chai. Their goal was to allow tea lovers to prepare thousands of recipes and enable real-boiling at a perfect temperature the way tea is prepared conventionally.

Here are some of the features that client required:

- Users should be able to schedule the order and watch tea made live on Arya's website or mobile app.
- The solution should have a unique recipe builder where users could set the quantity of ingredients they want in a cup of tea. For example, a user should be able to set the sugar or teaspoon-count while creating their recipe.
- The robot should detect the user's face and reply back with their most favorite recipe name.

So, they approached us to make a unique robot with capabilities of AI and IoT.

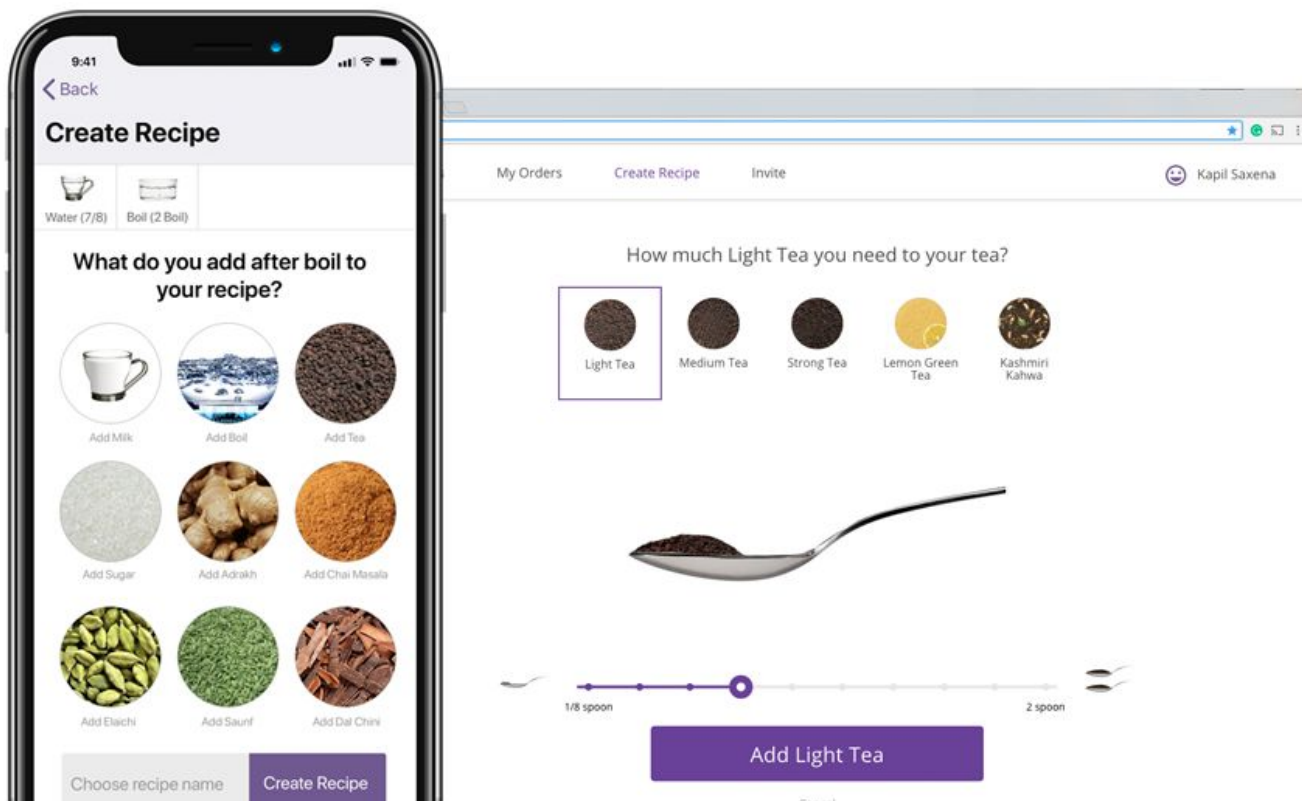
PROCESS

LeewayHertz embarked on the journey with HiArya in 2016. After the dedicated efforts of 2 years and six iterations, a robotic tea maker was ready to be installed in offices to deliver custom chai using real and fresh ingredients. LeewayHertz team of IoT engineers, AI/ML, Software development, Mechanical, Electrical, and Industrial Automation experts worked together to build an IoT enabled device.

LeewayHertz hosted multiple cloud microservices on Amazon AWS to meet Arya's server infrastructure requirements.

LeewayHertz developed the solution with the following equipment and technologies:

- **Google Assistant and Amazon Lex** to enable people to place an order by talking to Arya Robotic Tea Maker.
- **Face recognition using the camera** to recognize a person standing in front of Arya
- **Live-feed** to allow people to watch their tea made live.
- **Artificial Intelligence** to collect feedback, identify a user, fetch the user's most favorite recipe, track machine's status, and manage inventory of ingredients.
- **Google Cloud IoT** to manage, connect, and take IoT data from smart sensors used in Arya.
- **Machine Learning** to remember and store the user's tea recipe for a long time and enhance the beverages' quality with collected information.
- **Text Automation Response** to send notifications and alerts to the users.



CHALLENGE

In a country like India, people prefer consuming tea over coffee. Preparing a good cup of tea requires time and skills. People who spend most of their time in offices cannot start a day without a perfect cup of chai. But vending machines available in offices are not customized enough to give people an authentic flavored chai. Let's say a company has 500 employees. In this case, an organization might have to install a huge number of appliances to make tea using conventional ways. Also, it becomes challenging for the office boys to manage the preparation of tea when everyone has their own tastes and preferences. This is the reason why employees usually spend an average of 15-20 minutes going to the street vendors for a homemade flavor chai.



SOLUTION

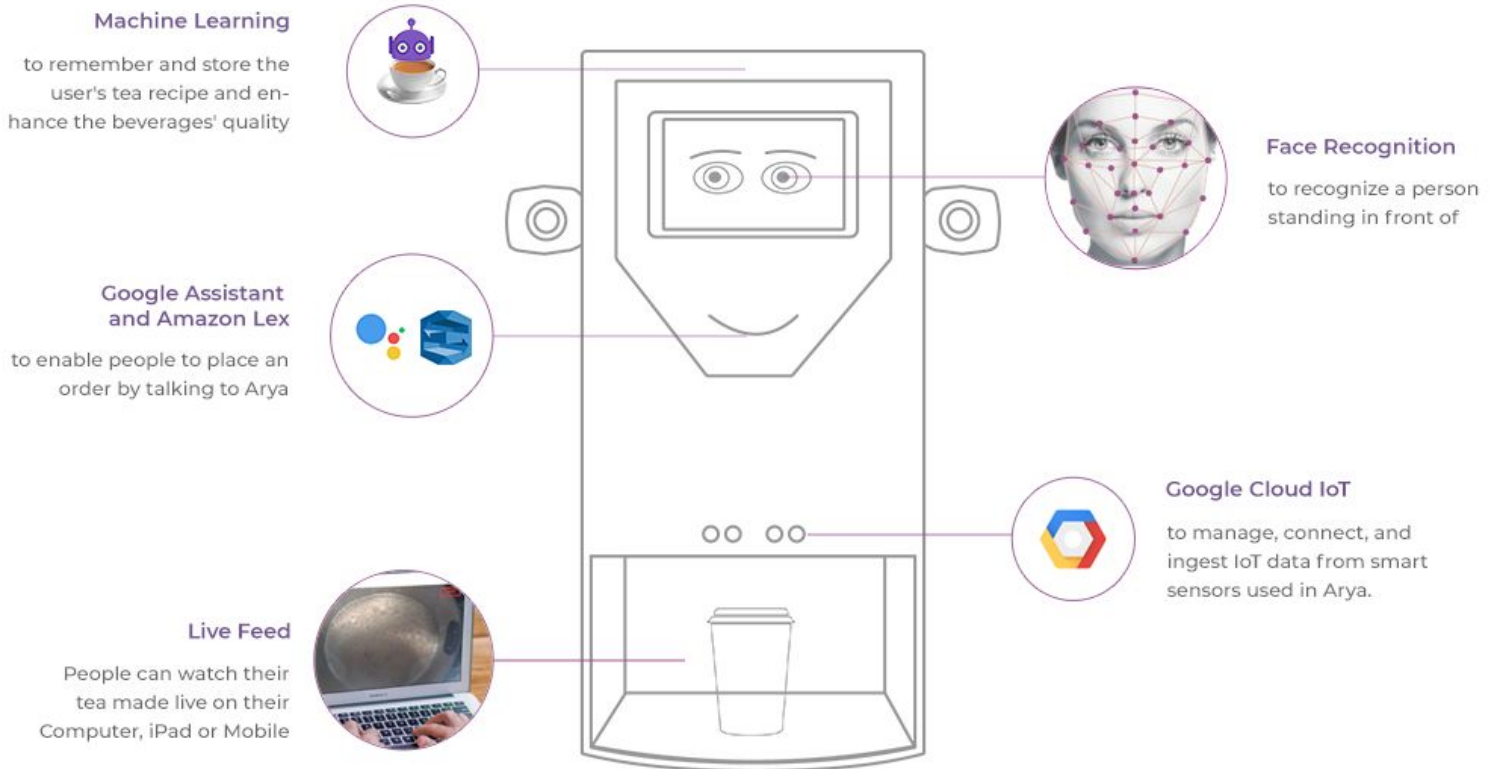
The client realized if offices would have a robotic tea maker that makes employee's preferred cup of tea, their productivity will not get hampered. LeewayHertz team of AI, Industrial Automation, and IoT

experts gathered requirements and decided the technology stack to be used in the development of a robotic tea maker.

LeewayHertz team used Amazon AWS to enable users to store thousands of unique tea recipes. Being able to deliver boiled custom chai within a time span of 2-3 minutes, Arya proved itself unique from all other vending machines in the market.

After the successful completion of the project, LeewayHertz compared Arya with other tea vending machines and found that it was able to deliver 100 cups of custom made chai per day at the perfect temperature.

Our Solution Features



IMPACT

World's first Robotic Tea Maker was officially launched on March 7th, 2018 at IoT Expo held in Delhi. Arya received an overwhelming response from the crowd and became the center of attraction for both national and international visitors who attended the event. Robotic Tea Maker served more than 1000 cups of chai in that 3-day event. Pre-booking for Arya has already been initiated, and the company is planning to launch 1000 machines by 2019 beginning. Many reputed media and press release companies like Zee News, Zee Business, Aaj Tak, Tech Tak, The Guardian, News Nation, and Dainik Bhaskar have also appreciated the launch of Arya, World's first Robotic Tea Maker. It was a proud feeling for LeewayHertz to work for a company that came up with a unique and innovative idea.

ABOUT HIARYA

HiArya Automation is a deep technology company based out of Gurgaon, India has provided the World's first Robotic Chai for making a good cup of chai using fresh and real ingredients. Their mission was to enable every person to make custom tea and watch how it is being made using a phone or computer.

ABOUT LEEWAYHERTZ

Established in 2007 and headquartered in San Francisco, we are one of the first organizations to deliver a commercial app for the iPhone. Our team of Certified User Experience experts has designed and produced over 100 digital platforms for startups and enterprises.

Being an award-winning custom software development company, we have an expertise in delivering digital platforms within timely deadlines and fixed cost.

For additional information, contact info@leewayhertz.com and, visit www.leewayhertz.com