

# THE WORLD'S FIRST AI-AUGMENTED FLAVOR AND SCENT

Leveraging Artificial Intelligence to increase speed-to-market and create a superior customer experience.



## THE BUSINESS CHALLENGE

The process of formula generation is highly complex and time-consuming, as it requires **numerous iterations of trial and error** with **over 4,000 ingredients** to consider for the perfect creation. This complexity is augmented by the **ever-changing consumer trends, and growing demand for a more personalized experience** across markets and consumers. Having identified the potential benefits of integrating AI into this process, our client partnered up with Visium. The combination of advanced AI capabilities, with human creativity to automate this process, could provide significant opportunities for our client to **create better formulas, faster than ever before.**



## THE SOLUTION

Our AI engineers developed a solution which reinvents Fragrance design. The model **accurately and autonomously creates chemical formulas, by analyzing and choosing from all 4,000 ingredients** on the basis of:

- **Historical data** on the chemists' previous formulas
- Constraints on the ingredients, **desired scent outcome and production cost**
- Data on the **format parameters** matching the application (e.g. candle vs. shampoo)

**Chemists set the requirements and constraints, and the model outputs multiple powerful starting points**, which the creators can then iterate to create the **perfect sensory experiences faster and more creatively** than ever before. The model systematically empowers the creators to achieve superior creations by taking into consideration more ingredients and identifying formulas that meet a complex combination of parameters, including olfaction, format, dosage, safety, price and sustainability.

## MEASURABLE RESULTS

**Creativity**

Enhanced creativity and novelty of formulas

**50%**

Potential increase in speed-to-market

**Up to 10%**

Higher satisfaction ratings in consumer tests

\* Watch the [joint keynote with Firmenich](#) on the project at the Applied Machine Learning Days, 1st March 2021.