

# EBRIUS

## Project

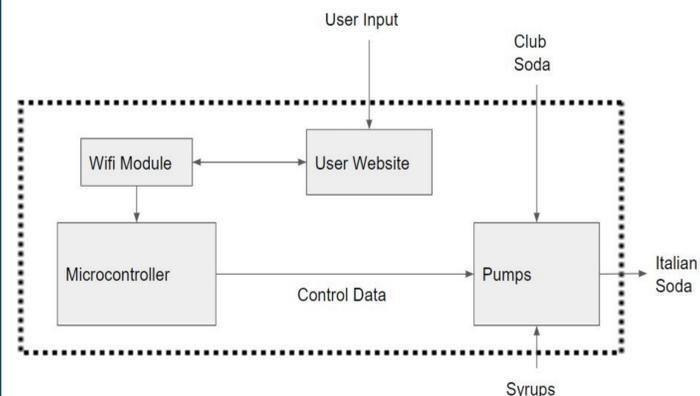
EBRIUS the Italian Soda Robot: Making Italian Sodas Enjoyable and Simple

- Problem: Inconsistent soda to syrup ratios make it difficult to make a perfect Italian soda at home.
- Solution: EBRIUS is a hands-free, automated beverage maker that ensures a consistent ratio every time.
- Motivation: EBRIUS provides an affordable, aesthetic, and enjoyable Italian soda experience for households.

With EBRIUS, making delicious Italian sodas at home has never been easier. Enjoy a predictable and refreshing drink every time, without any of the hassle.

## System

### System Overview



## Methods

- User selects syrup flavor: The user selects the syrup flavor they want by filling out a form generated by an internal server.
- Board calculates syrup amount: The board receives the user's syrup flavor selection through a Universal Asynchronous Receiver-Transmitter (UART) and calculates the exact amount of syrup needed using a pre-programmed formula.
- Pumps dispense syrup: Once the syrup amount has been calculated, the board sends a signal to control the pumps that dispense the syrup into the glass. The pumps use peristaltic technology to dispense the syrup.



## Conclusion

- Our experiment aimed to design and test an automated soda fountain system. The results we obtained suggest that our solution was successful in achieving the objectives of the project.
- We found that EBRIUS - the Italian soda robot was able to accurately dispense the desired amount of soda and syrup with consistent quality. The system was also able to function with minimal error, providing a convenient solution for consumers in a fast-paced environment.
- Our results fit into the big picture of automation and innovation in the food and beverage industry. Automated systems like EBRIUS have the potential to improve efficiency and customer experience, while also reducing labor costs and waste.
- Through this project, we learned valuable skills in electrical engineering, including circuit design, programming, and troubleshooting. We also gained insights into the challenges and opportunities of designing and implementing automated systems in a real-world setting.
- Moving forward, we would like to continue refining EBRIUS - the Italian soda robot and explore other applications of automation in the food and beverage industry. We believe that our work has the potential to make a positive impact on the industry and the customers it serves.

