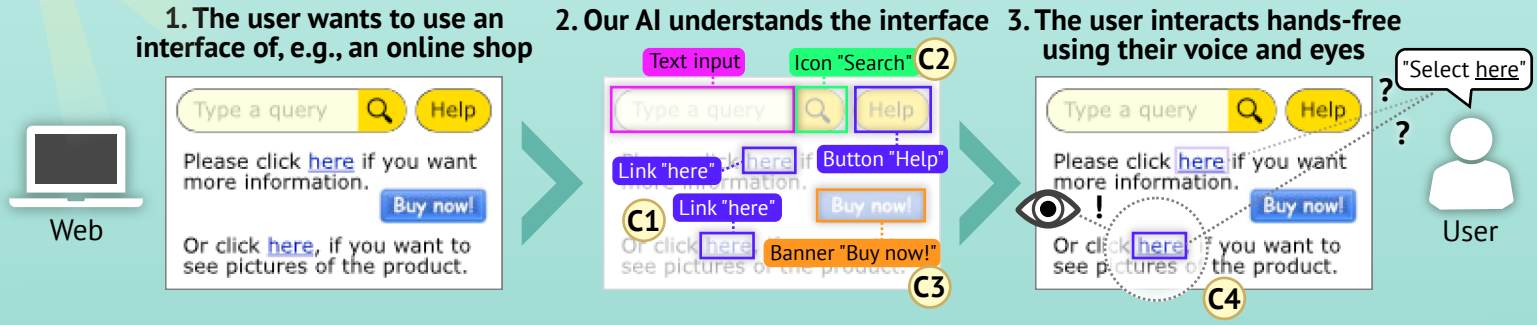
Semanux

We make the Web inclusive

In today's digital society, the Web is everywhere. We use it to inform ourselves, do shopping, be entertained, and get work done. But there are more than 50 million people worldwide who need assistive technology for communication. Only about 2% of them have access to modern assistive technology. Specifically, people with motor impairment caused by an accident, illness, or aging, cannot conveniently use mouse, keyboard, or touch. This excludes many individuals from nowadays essential services and modern working environments, making them second class citizens in the digitized era.

Idea

In Semanux, we want to make people with motor impairment first class citizens on the Web:



Challenges

- **C1** Find interactive elements on Web interfaces.
- **C2** Understand icons without title or accessibility annotations.
- **C3** Decode embedded texts reliable and in real-time.
- **C4** Adapt the interaction for hands-free input means.

Approach

We develop an AI that considers hypertext, accessibility annotations, and pixel patterns from the screen – creating an AI to understand all Web interfaces and to adapt for hands-free interaction.

Market Potential

Targeting Consumers

We create a Chrome-based browser that adapts the interaction with Web sites for social media, communication, entertainment, and shopping.

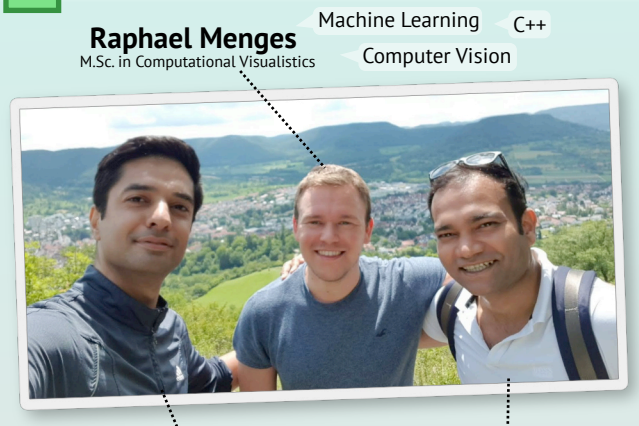
Targeting Businesses

We integrate our technology with business software by IBM, SAP, and Microsoft to support or even enable the inclusion of employees.

Market Size: According to the market leader in eye-tracking technology Tobii AB, at least 50 million people worldwide need assistive technology to communicate. But only 1 – 2 percent of the target population are using an assistive system that makes the digital environment accessible to them.*

*https://www.tobii.com/siteassets/tobii-group/investor-relations/roadshow-sep-17-18-2019.pdf

Team



Awards

Raphael Menges and Chandan Kumar have developed GazeTheWeb, an award-winning Web browser that is controlled solely via eye gaze. The design, technology, and business potential was decorated at various venues.

- Winner of the Web for All Accessibility Challenge
- Honourable Mention for Technical Approach
- Scored Third for Digital Impact

Submission of the project to EXIST Transfer of Research in January 2021. **Interested in the project? Contact us!**

contact@semanux.com

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