

# Sfered: Custom Eyewear Meets Grasshopper

With a background in architecture, Sybren de Graaf – CEO and founder of [Sfered](#) – discovered the potential of Grasshopper and used his design knowledge to create a revolutionary online service for opticians. Sfered's service allows for the customization of frames using a 3D parametric model placed on the client's scanned face. The result is a personalized and comfortable fit unique to each individual.

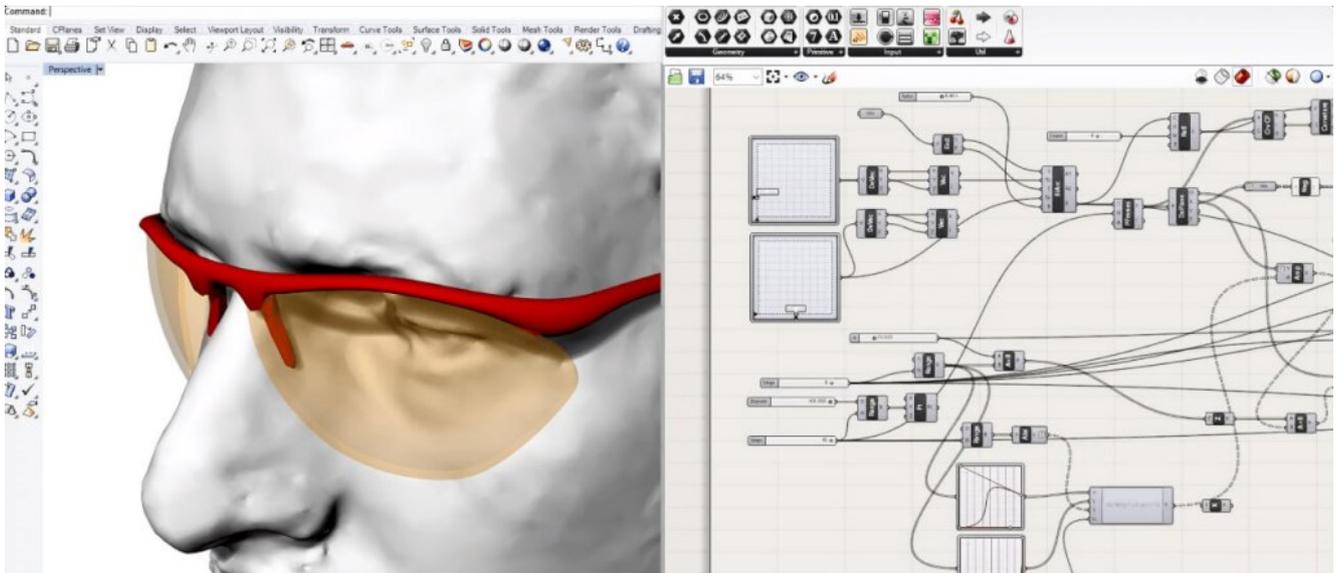


## *Early Sfered demonstrations at a dutch optical fair in 2015*

Sybren de Graaf was born in 1977 in Surinam and moved to the Netherlands when he was five. In 2006, he graduated from TU Delft and started working as an architect and inventor in Amsterdam.

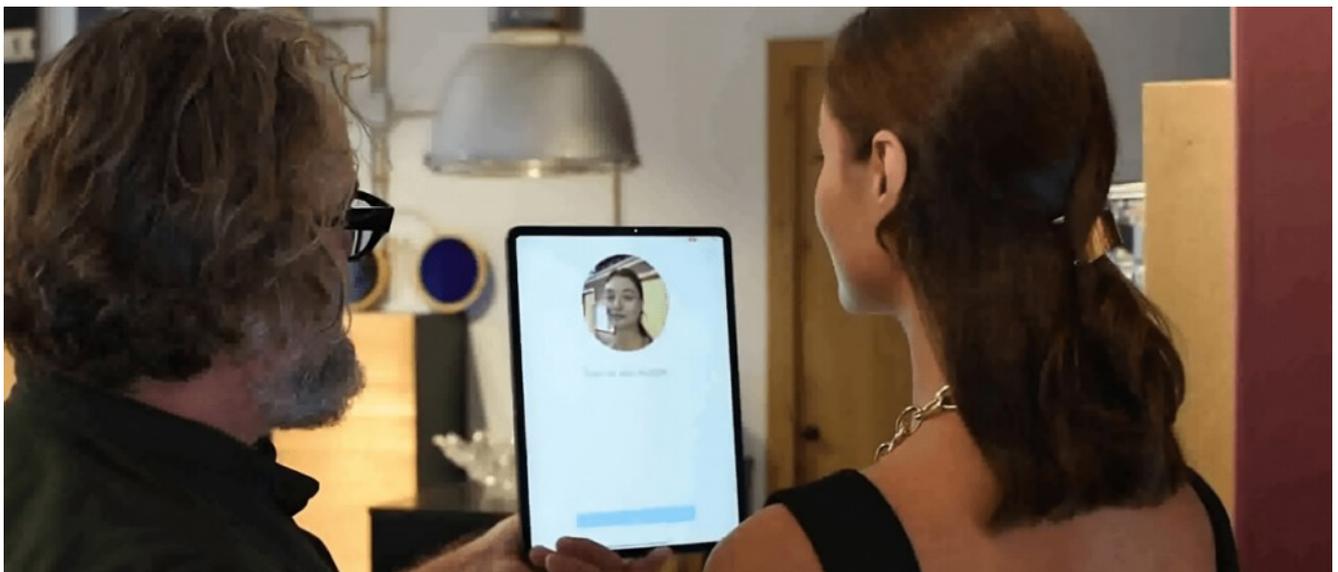
For years he has been working as an architect on tools to support his design trajectories and explore new fields in architecture and design. This has evolved into craftsmanship, where algorithms, design, and making come together in realized buildings and objects.

Then, in search of his own self-made spectacle frame, he started the development of custom-fit frames on a whole new level that didn't exist yet.



In 2009 he discovered Grasshopper as a then-new upcoming tool to combine design and programming without coding knowledge to create objects and architectural models with his 3D printer. He saw it as the link between the design process and reality. Constant alterations of drawings and prototypes are tedious, and implementing programming in the drawing process makes it much more integrated.

He slowly understood the level of complexity of design and eyewear was closely related to architecture, and computational design was a perfect way of both learning the trade and not needing to redo all the work continuously.



*Clients get a perfect fit thanks to the 3D mesh generated by the initial scanning process.*

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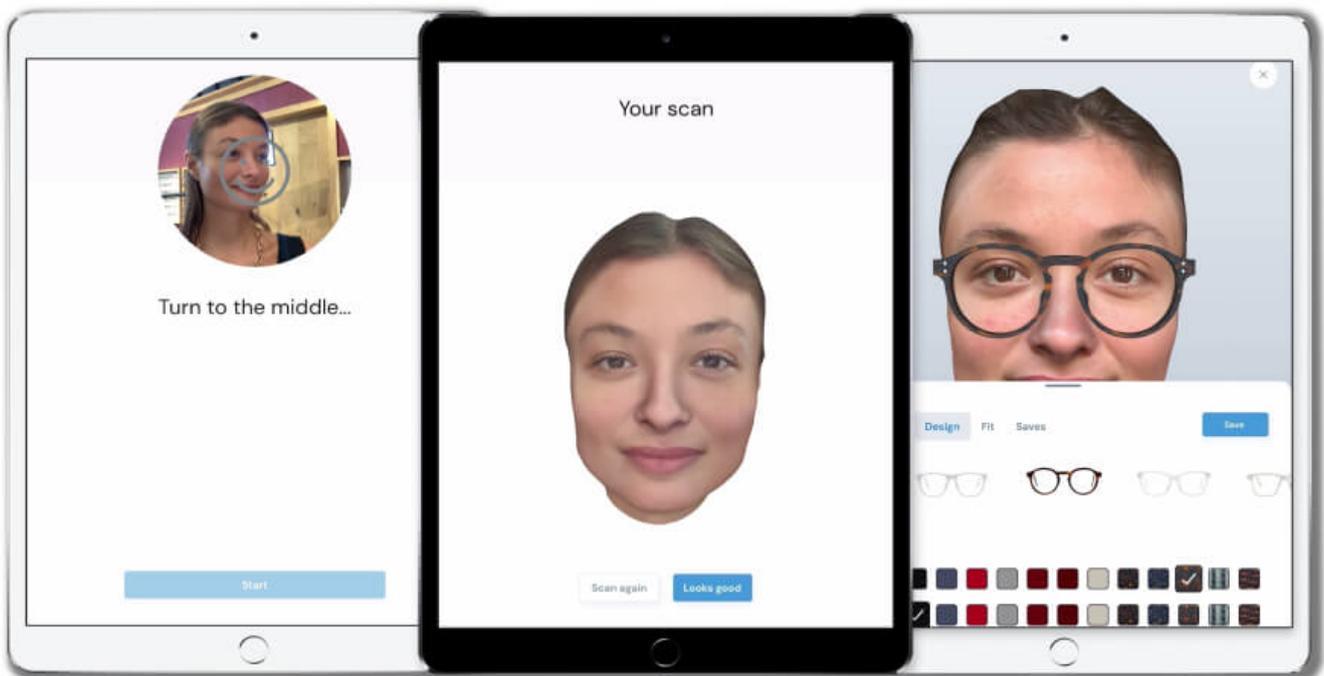
Sfered is an independent Dutch software company specializing in

eyewear customization and virtual try-on (VTO) based in Amsterdam.

The technology that Sfered built is unique and patented. They were the first to introduce a working customization platform for eyewear in the market. They developed a completely integrated system that positions a frame correctly on a 3D-scanned face and can select a frame based on facial characteristics. Combined with lens prescription, it offers a totally customized frame automatically to create a perfect fit.

*We use grasshopper in parts of our workflow – integrating our code, the design possibilities of Rhino, and bringing the parametric design to a new level with 7 billion custom fits.*

For opticians in the Netherlands, they have the iOS app “Frametric”, the most comprehensive digital solution for fitting eyewear with happy customers.



It was a challenge to get the complete technology stack working: scanning, a user-friendly app, backed systems, and happy clients are difficult beasts to get in line and working.

These challenges can be overcome with the right mindset, team members, and partners like ShapeDiver, who understand the complexity and are intrinsically set up to handle the intricacy that comes with linking different technologies from multiple disciplines.