ERG ACCESSORY FOR EARLY DETECTION OF NEURODIVERGENCE

Summer Research Project
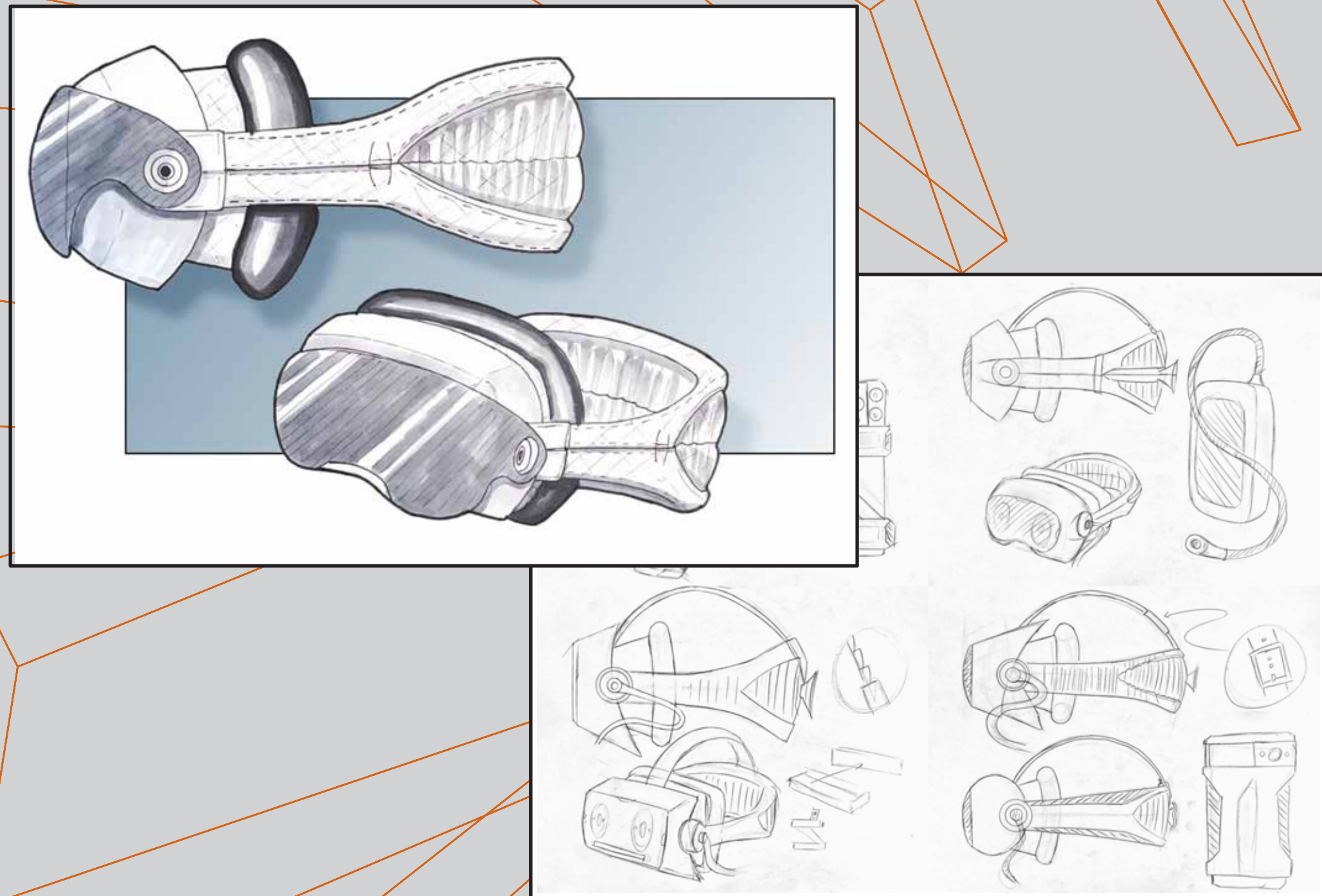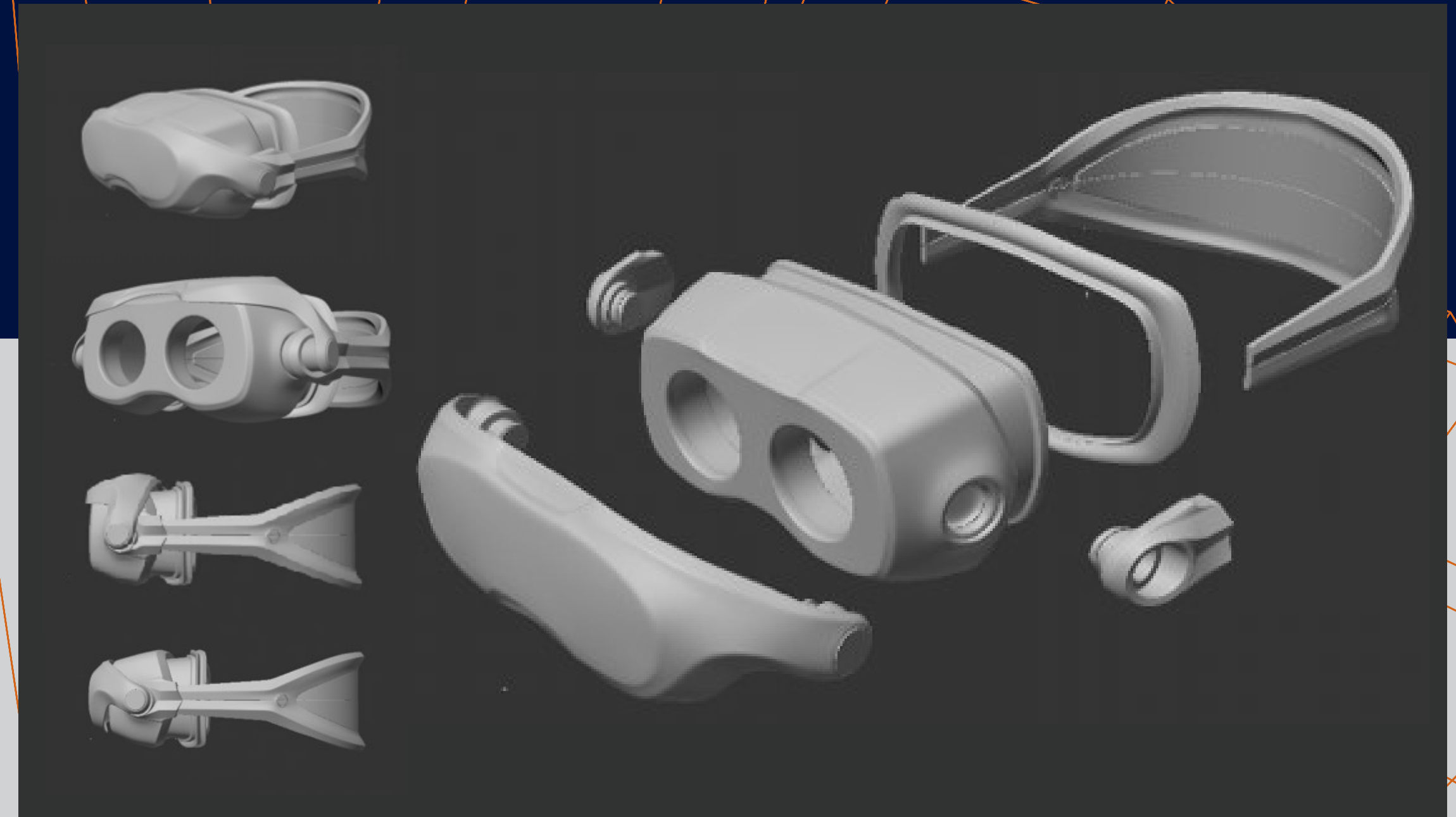
Student: **Pranav Nair**

Lead Advisor: Jorge Paricio Garcia, MID, HRM, PhD

Advisors: **Hugo Posada Quintero, PhD Dept. of Biomedical Engr.**

           Paul Constable, PhD, Flinders University, South Austraila

           Fernando Marmolejo-Ramos, Univ. of South Australia

Pranav Nair, a talented student from the Digital Media and Design (DMD) program at UConn, spearheaded the development of a second-generation prototype for a portable retina scanner. This project is part of a National Science Foundation (NSF) grant titled <u>Leveraging Biomedical Instrumentation, Signal Processing, and Artificial Intelligence for Understanding and Embracing Neurodiversity</u>. The research also contributes to an Ideas Grant 2024, sponsored by the Australian Government, highlighting its global significance and potential impact.

Building on the groundwork laid in the Senior Design 4001 and Senior Design 4002W courses during the 2023-24 academic year, Pranav advanced the initial design to create a more refined and functional prototype.

This development process involved collaboration with past researchers, current advisors, and graduate students working on the project. Pranav's efforts focused on creating additional visual concepts, generating a final rendering, 3D modeling and producing a 3D-printed prototypes. These are critical for ongoing research, enabling further exploration into the capabilities and applications of retina scanning technology.

Pranav's interest in industrial design led him to contribute to this project, leveraging his interest in 3D modeling and concept rendering, to create innovative tools for understanding neurodiversity. The resulting prototype is a testament to the collaborative spirit of the research team, paving the way for future advancements in this area of study.

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