**PROJECT PROPOSAL**

**COMP 496: SENIOR DESIGN II**

**SPRING 202**5

**Stack Underflow**

**AR Mental Health Companion**

1. **MEMBERS**

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1. **PRODUCT DESCRIPTION**

The Augmented Reality (AR) Mental Health Companion is a web-based application designed to support emotional well-being through a range of interactive features. It offers personalized daily check-ins, allowing users to log their moods and thoughts, with the system analyzing inputs to provide relevant and compassionate advice. The platform's NLP and sentiment analysis components rely on machine learning models trained on to ensure accuracy and sensitivity in understanding user input. The app includes tools like mood tracking, journaling, and streak logging to encourage consistent self-care practices. Emergency detection is built-in to identify concerning text inputs and immediately provide contact information for helplines. Users can also access a variety of mindfulness exercises, coping activities, and a resource hub with links to additional mental health support. This platform blends technology and mental health practices to create a supportive, engaging, and personalized experience for managing emotional wellness.

# PRODUCT SCOPE

Our AR Mental Health Companion proves to be a semester’s worth of work for all teammates due to the complex features we want our product to have. By combining our team skill set, we’re looking forward to accomplishing something new and unfamiliar. An example of this product’s complexity would be the integration of machine learning by utilizing Natural Language Processing for the interaction with users and even mood predictions using TensorFlow or PyTorch. Four out of five team members currently taking the elective Augmented and Virtual Reality this semester, shows dedication to learning new skills that will be applied to our capstone project. We will be using Unity to create our environment which also attests to the numerous deliverables needed to successfully accomplish this product.

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