Project Proposal Document

In the realm of modern education, fostering collaboration and engagement among students is crucial for effective teaching and learning. Group assignments serve as a valuable means to encourage teamwork and knowledge sharing. However, the process of creating and managing student groups can be a time-consuming and complex task for educators.

Enter "Gruuper" - our senior project's innovative web application tailored for professors and teachers. The primary objective of Gruuper is to simplify the creation and management of student groups, ultimately improving the classroom experience. This web app provides educators with an intuitive platform to generate, save, and adjust student groups as needed. By developing Gruuper, we aim to streamline group management for educators, enhancing the educational experience for both instructors and students.

Currently, the only class-grouping websites out there are all randomly based. There are an endless amount of Random Team/Group generators out there, both as websites and applications. Some bigger applications, like Class Dojo, also have functions to randomize groups as well, but with no complex group matching.

With our questionnaire, we aim to lead the market with specifically-curated group creation, rather than random. In addition, with high customization, the teacher can use their knowledge of the class to hone in the ability of our group selector. We hope to design an intuitive website to capture all of these different aspects in a clean design.

For this project, we will be constructing the web-app with React, and deploying it with Vercel. For the back end, we will primarily be using Google Firebase. Our goal for Semester II is to implement our "group-selector" using Python.

At Gruuper, we're embarking on an exciting journey. In last semester, our focus has been on laying the foundation for a user-friendly platform designed to empower teachers in creating and managing class groups effortlessly. However, we recognize that this is just the beginning. Our primary goal is to introduce the standout feature: intelligent grouping functionality.

In the upcoming months, our roadmap is clear. Firstly, we are dedicated to implementing a distinctive student questionnaire profiling system. This will involve students completing comprehensive profiles that delve into their skills, work-life experiences, and personal interests.

Subsequently, leveraging the power of Machine Learning, we aim to utilize these anonymized personal profiles to intelligently match students into groups that best complement their individual strengths and preferences. This cutting-edge approach will ensure optimized group formations tailored to enhance the learning experience for every student.

As Computer Science majors, we have had plenty of experience with the struggles of group work. For this project, we will have the opportunity to use the skills we have learned in classes such as Web App Development, Interaction Design, and Cognitive Systems Design in order to create our project. However, we also get to explore areas where we have not spent a lot of time, like User Experience and Machine Learning. With our web app already built from last semester, it leaves us the perfect amount of time to focus on our group selection functionality this semester. We feel that this project is something that we are certainly capable of completing, and we have gotten great feedback from instructors like Dr. Forney that would love to use it in the future!