Team 2 CSC 4350:

Software Engineering

**Client:** Dr. Rao Casturi

**Team Members:**

1. Kaleb Befekad
2. Zaid Ansar
3. Muhammad Sameer
4. Minhad Mahmud
5. Ahmed Ahmed

**AI Adaptive Study Timer**

**Project Description**

**Introduction**

Studying has become increasingly challenging due to numerous distractions in our digital age. The rapid expansion of the internet and social media has magnified these distractions, causing a decline in people's attention spans. Many now struggle to maintain focus and dedication to their studies.

Our solution recognizes these challenges and aims to enhance concentration and study efficacy. Here's how it works. The first way it achieves this is by allowing users to create study subjects (objective). After creating a subject, users can set study goals and schedules for it. They can create as many subjects as they desire. Based on a user-provided questionnaire, our AI will suggest an ideal study-to-break ratio, tailored to individual attention spans and study objectives. The software logs your study habits, tracking start times, breaks, and completion. Over time, as it processes this data, the AI refines its recommendations, fine-tuning the optimal study pattern for each individual.

Our whole approach to the AI adaptive study timer will be based on science. From the questioner to the AI and the entire software setup will consider different disciplines of science. Our AI will be fine tuned based on the latest scientific literature. We will look at different physiological, neurological, and behavioral researchers to make the AI more helpful.

The flow state is a term named by Mihaly Csikszentmihalyi​ which is a state of mind where an individual is fully immersed in the task at hand leading to a heightened state of focus and productivity. Our main goal is for our users not just to improve their focus but also get into the flow state.

After creating this web based software we will help students or anyone who is trying to study improve their focus and overall study habit.

**Why did we pick this project?**

We went with the AI Adaptive Study Timer project because, honestly, it sounded like a whole lot of fun compared to the other options like the parking space finder or the travel guide. We figured people would really be interested in something AI related to help them study. Plus, we wanted to dive deeper into the world of AI and get some hands-on experience with it, and this project looked like the perfect way to do that. So we’re really excited to make studying more efficient and have a great time learning with AI in the process!

**Technologies**

Client-side interface is going to be designed using the Figma Collaborative Interface Design Tool.We hope to design an intuitive and easy to read interface for ease of use. we’re planning on using a low code web app development tool such as Bubble.io or Retool in order to allow for easier communication and collaboration, flexibility to adjust the app as needed, and reduce development time. Additionally we plan on using the OpenAi API in order to read the data the client submits and deliver what would be the best solution.

**Team-Bio Data**

**Zaid Ansar:** Zaid is a senior at Georgia State University, majoring in Computer Science. He's really good with Python, Java, and making Android apps, especially when it comes to using Firebase databases. Zaid has a solid track record of creating cool stuff with Python and Java, like that Task Manager App for Android using Flutter. He's also great at using Firebase to make data storage and syncing systems work smoothly.

**Kaleb Befekadu:** is a senior Computer Science student currently also pursuing a Data Science certificate. I possess technical skills in Python and Java programming languages. In the past, I've undertaken both frontend and backend projects. I have more experience with frontend development, where I've used JavaScript and React.js. On the backend side, I am familiar with SQL and some node.js. I have also done multiple software projects from idea to full functional software so I have an understanding of the project cycle. I have experience with no-code and low-code technologies such as Webflow and Wix. Besides that, I have worked on animation projects where I learned to design and use Blender." Regarding soft skills, I am good at communication, and teamwork.

**Muhammad Sameer:** is a senior Computer Science student at GSU, specializing in cybersecurity. He excels in Java, Python, and C programming and has hands-on experience with Firebase for database management, particularly showcased in his restaurant locator project utilizing the Google Places API. Proficient in HTML, CSS, and JavaScript, he has a strong background in web development and user interface design. With an adaptable and eager-to-learn attitude, Muhammad is always ready to explore new technologies and contribute to innovative projects in the field of cybersecurity and beyond. He is also passionate about delving into the world of AI, with a keen interest in integrating and training AI for his projects.

**Minhad Mahmud:** is a Senior Computer Science Student at GSU.I have experience in Java, HTML, CSS, JavaScript, and python. I have a substantial amount of experience using databases and APIs.. I am also heavily interested in both cybersecurity and the field of AI. I’m also very skilled in communication and have a lot of experience dealing with various clients.

**Ahmed Ahmed:** is a senior Computer Science student at Georgia State University My passion for technology and programming has led me to specialize in two powerful programming languages, Java and Python. Through my coursework and projects, I have gained some skills in these languages and gained an understanding of their applications.I am particularly intrigued by the upcoming AI application project we are about to start on. The idea of creating an artificial intelligence to create a study timer is exciting to me,

**What are the Issues we see**

As we embark on the journey to develop our AI adaptive study time project, we anticipate a range of challenges that underline the complexity of our project. Among these challenges is our relatively limited experience with databases, new technologies for web development, training and integrating AI, time and resource limitations among other thing.This project necessitates a deep understanding of these technologies to effectively track study habits and implement AI-driven study recommendations. Overcoming this learning curve is vital for the project's success, prompting us to commit significant time to research and hands-on experimentation.

In addition to the database complexities, we anticipate the need to master new technologies in the field of web development. Utilizing low-code resources like Figma and Bubble.io will enhance efficiency, but understanding their capabilities will be essential. Ensuring the creation of an intuitive and user-friendly interface will depend on our ability to learn these tools as we progress.

Another significant hurdle lies in our integration of AI. As newcomers to this field, grasping the complexities of machine learning algorithms and models may pose a challenge. Crafting an AI system capable of individualized study recommendations will require a deeper understanding of AI principles, which we aim to acquire through dedicated research and experimentation.

As we face technical challenges and learn, team collaboration is crucial. We'll hold regular knowledge-sharing sessions and collaborative meetings. By leveraging our diverse skills, we aim to overcome hurdles and build a strong foundation for the AI adaptive study time project, improving users' study habits and focus.