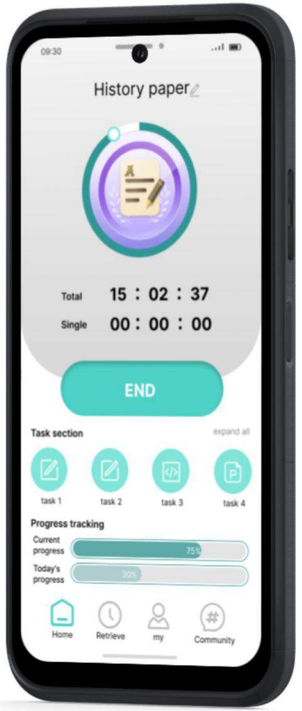
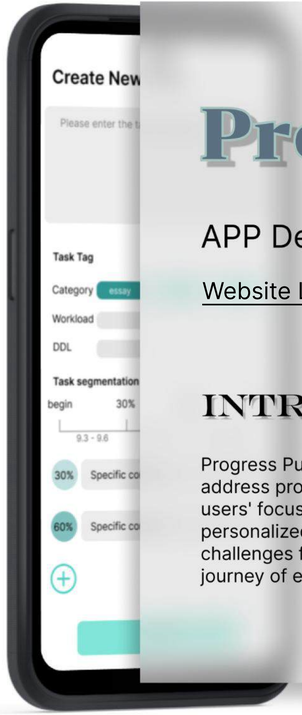




Progress Pulse

APP Design | UI/UX Design

Website Link: http://39.97.247.157:3000/login

INTRODUCTION

Progress Pulse is an efficiency tool designed based on the concept of 'dynamic visualization,' aiming to address procrastination by supporting the process. Its core is a badge system that responds in real time to users' focus and task progression, turning abstract effort into intuitive visual growth. The system achieves personalized adaptation based on scientific procrastination assessment (PASS), providing just the right challenges for different users. Ultimately, it aims to transform users' struggle against procrastination into a journey of exploration driven by positive feedback and visible growth.

OBSERVATION

The academic procrastination of surrounding classmates

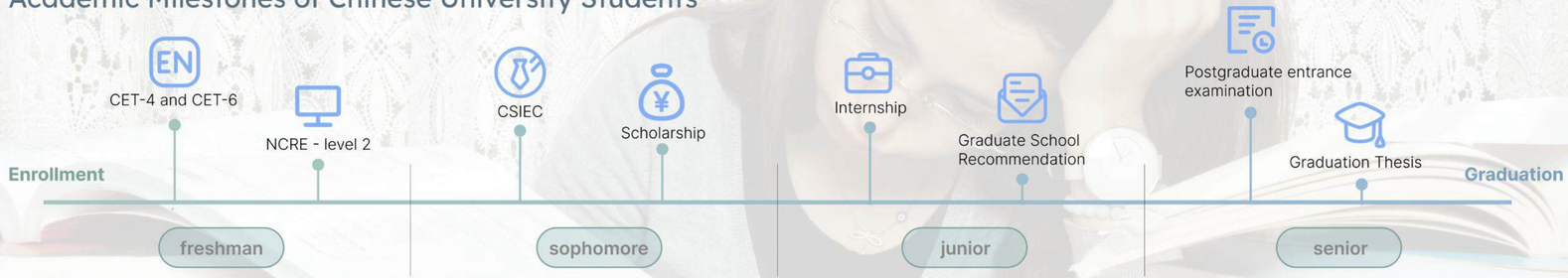
As graduation approaches and academic tasks increase, my classmates and I have all begun to experience varying degrees of academic procrastination.

Summary

In summary, during the course of their studies, many students around have experienced academic procrastination symptoms in various aspects, including task execution, time management, and cognitive emotions. Furthermore, these symptoms have seriously affected normal learning and daily life.

BACKGROUND

Academic Milestones of Chinese University Students

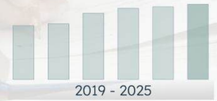


Current Status of Academic Management for University Students

According to statistical data, the gross enrollment rate and the number of students in higher education in China have continued to grow, which means that the base of students needing to cope with academic challenges is very large.

According to data from the Ministry of Education, in 2025, China's gross enrollment rate in higher education reached 60.8%.

The number of graduates from ordinary colleges and universities has reached 12.22 million. This marks that higher education has entered a stage of popularization.



However, in the official undergraduate training programs of the vast majority of universities, 'academic plan management' is neither offered as a compulsory course nor even as a mainstream elective course.

Consequences of low efficiency：

Direct loss of opportunities

- Decline in academic performance
- Missed a crucial opportunity
- Low work quality

Enormous emotional drain

- Persistent anxiety
- Low work quality
- Learned helplessness

Affect the quality of life

- Limit future choices
- Harmful work pattern
- Work-life imbalance

THEORY RESEARCH

How to scientifically improve academic procrastination

Progress Visualization Theory

Making progress visible is a key mechanism for enhancing motivation through gamification.

The evolution of badge materials, along with real-time adjustments to transparency, together create a continuous and intuitive 'visual narrative' about task progress for users, making abstract advancement tangible and perceptible.

Hamari, J., Koivisto, J., & Sarsa, H. (2014, January). Does gamification work?--a literature review of empirical studies on gamification.

Self-efficacy Theory

Frequent small achievements can effectively enhance an individual's sense of self-efficacy (i.e., confidence in **their ability to complete tasks**), which is key to overcoming the initial feelings of helplessness associated with procrastination.

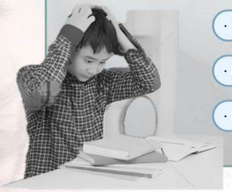
This mechanism breaks down large tasks into tiny subtasks, providing frequent positive feedback, aiming to cultivate the user's sense of competence and control.

Ryan, R. M., Rigby, C. S., & Przybylski, A. (2006). The motivational pull of video games: A self-determination theory approach.

USER RESEARCH

Target Users

This system is mainly aimed at **undergraduate students** in higher education, especially those learners identified through procrastination assessment scales as having **moderate to high levels of procrastination.**



- · Typically facing short-term, high-intensity academic task deadlines
- · May find traditional task management tools ineffective or boring
- · Difficulty starting and trouble maintaining focus

Interview

Jessica

Gender: Female

Age: 20

Undergraduate

painpoint：

Students feel out of control because it is difficult to quantify task progress, and the lack of visible positive feedback leads them into a cycle of anxiety and procrastination.

Can you briefly describe your study status over the past week?

It's simply a complete mess. I have a report due this week and it feels so overwhelming that I don't know where to start. I kept procrastinating until last night, when I finally pulled an all-nighter to barely finish it.

Do you usually use any tools to help with planning?

I have several apps installed on my phone, but the one I use most often is the built-in Notes app. I carefully list all my tasks in it and set the deadlines.

Do these tools feel helpful?

Limited effect. The moment I write them down, I feel particularly good, as if the task has already been completed. But the problem is that the lists keep getting longer. They merely remind me 'there are things to do,' but don't tell me 'how to start doing them.'

CONCEPT

Ideation

Start Task

- Task Breakdown
- Clear timeline

At the initiation level, Guiding users to transform any large task into an immediately executable, stress-free first step.

In Progress

- Adaptive adjustment
- Microtask
- Minor success

During the task, help users plan scientifically rather than blindly filling time, and enhance confidence through small successes.

Finish Task

- Get motivated
- Accomplishment

Stimulate a sense of intrinsic achievement after completing tasks, promoting a positive cycle.

HMW： How might we help procrastinating students bridge the gap between their present inaction and future task completion?

1 Reduce startup resistance & alleviate anxiety

Tasks are automatically broken down into micro-tasks, making large tasks feel manageable and easy.

Taking the first step seems to have become easier.

2 Enhance engagement & maintain motivation

Transparency adjustments and material upgrades make users' effort and focus visible in the process.

3 Provide positive reinforcement & reshape mindset

The progress ring and material upgrades clearly display the percentage completed.

ITERATION

Problems and Improvements

Increase icon usage

Enhance brand recognition

Reorganized layout

Clarify information hierarchy

This is not only a visual enhancement, but also a shift in thinking from 'listing features' to 'optimizing experience.'

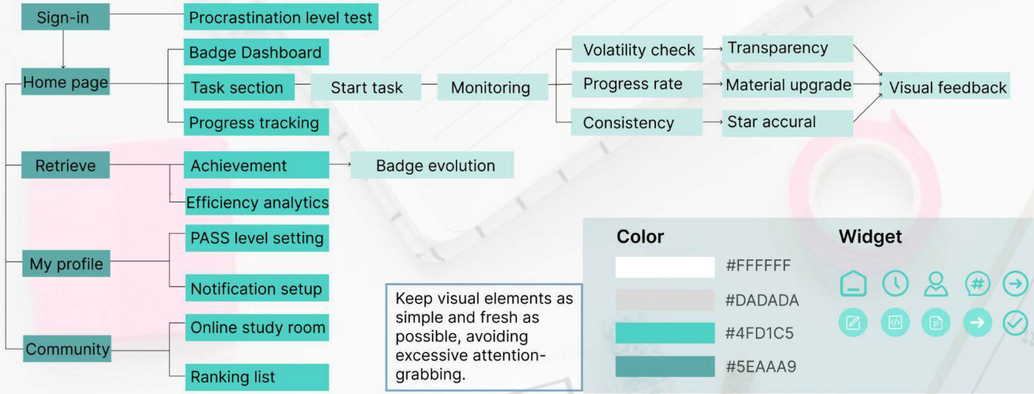
· Only having a textual title is not emotional or distinctive enough.
· The element layout is loose.

The icon instantly visualizes the app name, conveying the core concept of 'monitoring progress,' greatly enhancing the brand's uniqueness and memorability.

· The visual hierarchy is unclear and lacks guidance.
· Information is weighted evenly, lacking focus.

By optimizing the visual hierarchy, the problem of 'unclear information' in the original design is solved. It makes the interface clear at a glance, allowing users to focus more on the task planning itself.

WORKFLOW



Keep visual elements as simple and fresh as possible, avoiding excessive attention-grabbing.

Color

#FFFFFF
#DADADA
#4FD1C5
#5EAAA9

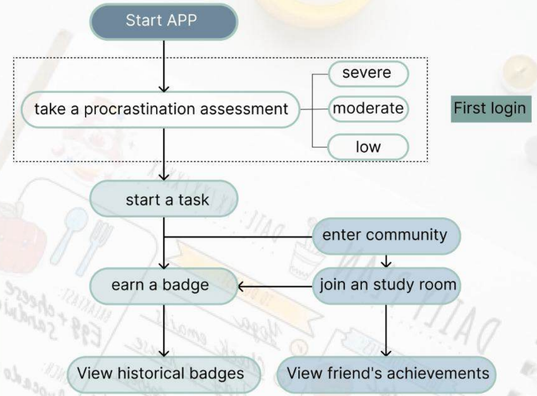
Widget

LOW-FI

After logging into their account, the user takes a procrastination test and obtains the results.

After completing a period of study, the user checks in their task progress on their own.

USER FLOW



TECHNICAL PROCESS

Techniques and tools used

Development tools

VS Code Pycharm Chrome

Programming language

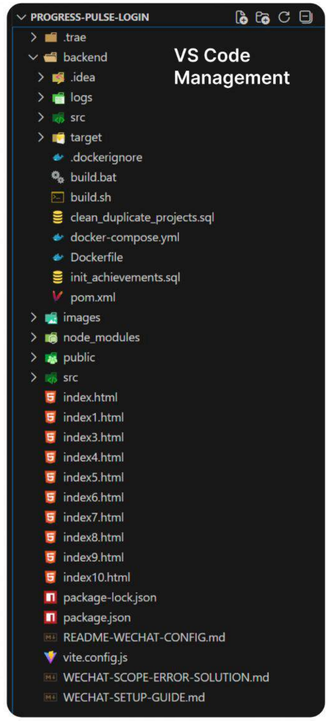
Python Java

Front-End technologies

HTML5 CSS3 Bootstrap

Back-End technologies

Django Flask MySQL



CSS-Loading animation

```
<style>
    #loading {
      position: fixed;
      top: 0;
      left: 0;
      width: 100%;
      height: 100%;
      background: linear-gradient(135deg,
#667eea 0%, #764ba2 100%);
      display: flex;
      flex-direction: column;
      align-items: center;
      justify-content: center;
      z-index: 9999;
      color: white;
      font-family: -apple-system,
BlinkMacSystemFont, 'Segoe UI', Roboto, sans-
serif;
    }
```

JavaScript-Control animation

```
<script>
    // Hide loading animation
    window.addEventListener('load', function() {
      setTimeout(function() {
        const loading =
document.getElementById('loading');
        if (loading) {
          loading.classList.add('loading-hidden');
          setTimeout(function() {
            loading.style.display = 'none';
          }, 500);
        }
      }, 1000); // Show the loading animation for at
least 1 second.
    });

    // Error Management
    window.addEventListener('error', function(e) {
      console.error('Application loading error:',
e.error);
    });
```

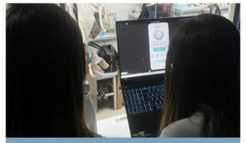
HTML-Web structure

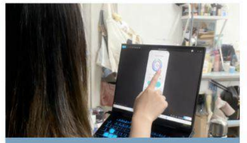
```
<body>
  <div class="questionnaire-container">

      <div class="progress-container">
        <div class="progress-text">回答进度：
<span id="currentQuestion">1</span>/20</div>
        <div class="progress-bar">
          <div class="progress-fill"
id="progressFill" style="width: 5%;"></div>
        </div>
      </div>

      <div class="instruction">

      </div>

      <div class="question-container"
id="questionContainer">
        <div class="question-number">问题 <span
id="questionNum">1</span>：</div>
        <div class="question-text"
id="questionText">I often do things that I had
planned to do several days ago.</div>

        <div class="options-container">
          <div class="option-item" data-
value="1">
            <div class="option-letter">A</div>
            <div class="option-text">Very
inconsistent</div>
          </div>
          <div class="option-item" data-
value="2">
            <div class="option-letter">B</div>
            <div class="option-text">Basically
does not conform</div>
          </div>
          <div class="option-item" data-
value="3">
            <div class="option-letter">C</div>
            <div class="option-text">Moderate
compliance</div>
          </div>
```

USER TEST

Techniques and tools used

In order to verify the feasibility of the software and user satisfaction, I gathered several university students to use this app for an academic writing task, and then interviewed them after the task to ask them to evaluate their experience using the app.


Introducing how to use it


Display page interaction


Start user testing


Feedback after use

User feedback

"I used to get a headache just thinking about big papers and kept putting them off. But the task breakdown feature in this app saved me, allowing me to start with small, manageable tasks. After completing a few of these small tasks, I found that I had already made more than half the progress without even realizing it."

"The dynamic changes of the badge are especially useful. When I can't resist switching screens to check social media, the badge starts to shake, as if silently reminding me. This makes me consciously put my phone away and try to keep the badge bright, which really improves my focus."

"I watched the badges upgrade step by step from wood to bronze, silver, and gold, just like leveling up in a game. It turned my monotonous review routine into a clear growth path, and the special effects when I completed tasks gave me a real sense of accomplishment, making learning fun."

HIGH-FI

The core mechanism of this software lies in transforming abstract learning activities into dynamic visual symbols. This process turns invisible effort into a visible narrative of growth, providing an immediate and positive feedback loop to combat procrastination.

Badges for Different Types of Tasks:

Writing task：

Coding task：

PPT task：

Badges in different states：

Badges, as the core of the design, will change according to task progress and the user's level of focus.

Click here to start the task, and at the same time start tracking your focus time.

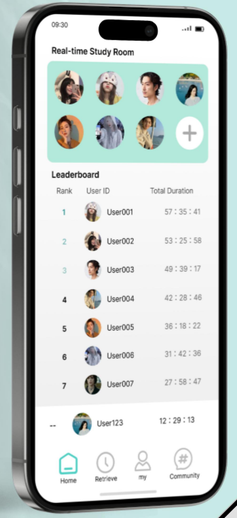
This module can manage created tasks and track the progress of each task.

In addition, the software also has a Retrieve module for displaying historical data, a My module for customizing the level of procrastination, and a Community module for rankings.

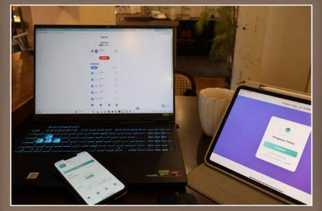
In the Retrieve module, users can track historical efficiency and achievements.

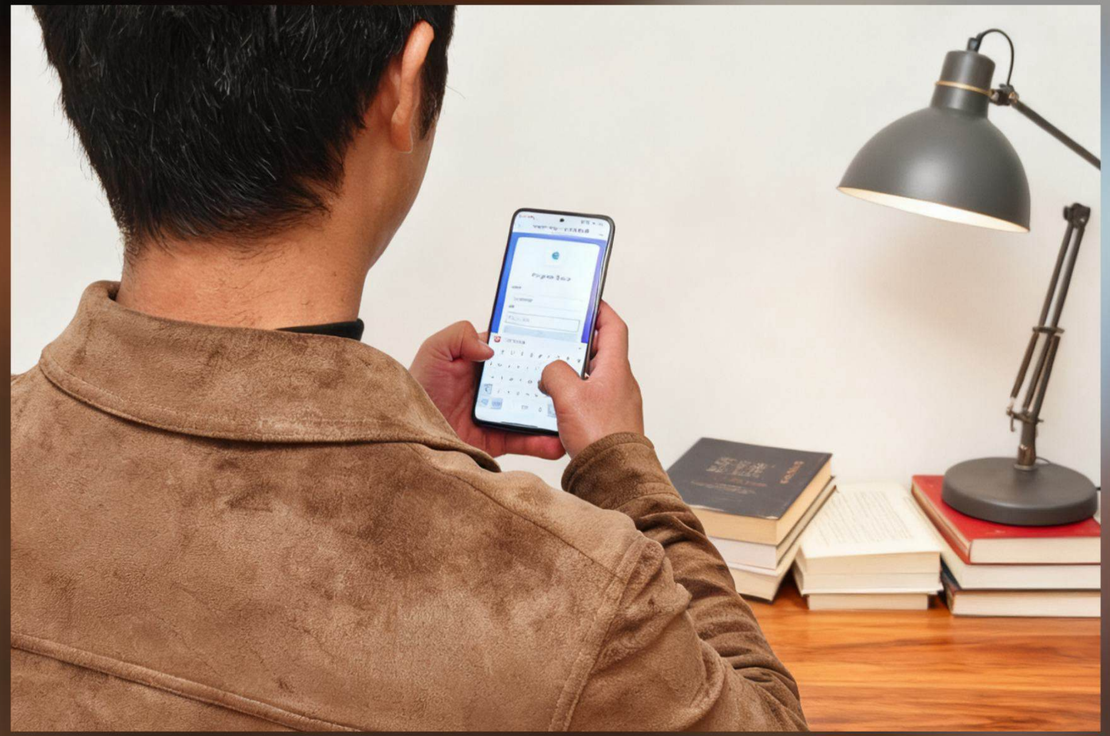
In the My module, users take the PASS test to understand their level of procrastination.

In the community module, users can join online study rooms and participate in focus duration rankings.



FINAL OUTCOME





REFLECTION

Examining design decisions

The most successful design decision in this project was visualizing task progress. User interviews indicated that the lack of positive feedback is a key factor in procrastination. Therefore, as users complete tasks, the changing dynamic badges allow them to clearly perceive their current progress.

Degree of procrastination \ Badge				
Low	65%	80%	95%	100%
Moderate	55%	70%	85%	100%
High	40%	55%	70%	100%

The biggest challenges and gains

The biggest challenge in the design is how to optimize the traditional static badge system, which only focuses on results, into a dynamic badge system that focuses on the user's effort itself.

Focus for 15 minutes at a time	Frequent switching between background programs

This kind of real-time feedback tells users, 'I see your focus,' 'You are making progress,' and 'Every small step counts.'

In summary, in this project, I successfully transformed complex psychological theories (such as self-efficacy and progress visualization) into an intuitive and supportive user experience, and the takeaway was redefining how digital tools can help people grow in a more human-centered way.