

NextStep – Testing Report

4.5 Testing

Testing is the process of evaluation of a system to detect differences between given input and expected output and also to assess the feature of the system. Testing assesses the quality of the product. It is a process that is done during the development process.

4.5.1 Strategy Used

Tests can be conducted based on two approaches –

- Functionality testing
- Implementation testing

The testing method used here is Black Box Testing. It is carried out to test functionality of the program. It is also called ‘Behavioral’ testing. The tester in this case, has a set of input values and respective desired results. On providing input, if the output matches with the desired results, the program is tested ‘ok’, and problematic otherwise.

4.5.2 Test Case and Analysis

TC001 – Registration-First Gating

Summary	Users shouldn't reach student pages until they finish a quick registration (choose their class).
Procedure	Sign up with a brand-new account, then try opening /dashboard and /aptitude.
Expected	You get redirected to /register. If you hit /aptitude directly, a clear banner asks you to complete registration first.
Actual	Works as expected.

TC002 – Email/Password Login and Provider Guidance

Summary	If an email is linked to Google, we guide the user to use Google; if the password is wrong, we suggest a reset.
Procedure	Attempt login/registration with: (a) a Google-linked email, (b) a valid email but wrong password, (c) a fresh email.
Expected	For (a) message says to continue with Google; for (b) offer password reset; for (c) registration goes through.
Actual	All three behaved correctly.

TC003 – Dashboard Requires Aptitude for New User

Summary	Brand-new users shouldn't see old data; they should be nudged to take the aptitude test first.
Procedure	Register, then open the dashboard without taking any test.
Expected	A prominent "Start Aptitude Test" prompt appears (requires_test = true).
Actual	Exactly as expected.

TC004 – Aptitude UI and Timer

Summary	Questions should load for the chosen class; the timer/progress should feel smooth; users can clear a choice.
Procedure	Go to /aptitude, move through a few questions, then use "Clear Selection".
Expected	Questions appear reliably, the timer is visible, and answers can be changed or cleared.

Actual	Everything behaved smoothly.
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TC005 – Submit Aptitude Updates Dashboard

Summary	After submitting, the dashboard should immediately reflect the new scores and guidance.
Procedure	Finish the test, submit, then open the dashboard.
Expected	Score and stream guidance are visible; previous “take test” prompt is gone.
Actual	Refreshed instantly.

TC006 – Humanities Detection via Social

Summary	If a student leans into social/history/english/economics, the system should recommend Humanities.
Procedure	Answer in a way that clearly favors humanities subjects and submit the test.
Expected	Guidance highlights the Humanities stream and related skills.
Actual	Recommendation matched the inputs.

TC007 – Skill Gap Live Refresh

Summary	After the test is submitted, the Skill Gap view should refresh on its own.
Procedure	Keep Skill Gap open, submit the test elsewhere, and watch for updates.
Expected	The radar chart and lists update automatically (no manual reload).
Actual	Auto-refresh worked.

TC008 – Career Paths Card CTA Only

Summary	The Careers card should be clean—just a single “Explore Careers” action.
Procedure	Open the dashboard after completing a test.
Expected	No long list of career titles—only the CTA button.
Actual	Looks clean and focused.

TC009 – Simulations End-to-End

Summary	Users should be able to complete a simulation end-to-end and see a meaningful score.
Procedure	Pick a scenario, answer all questions, submit, then revisit the same scenario.
Expected	Score appears; answers persist per scenario; a refresh event is dispatched.
Actual	Everything persisted and scored correctly.

TC010 – Fresh Start After Data Reset

Summary	When admins clear data, a new signup should start from a clean slate.
Procedure	Call the reset endpoint, register a new account, then open the dashboard.
Expected	The new user sees the “take the test” prompt again (requires_test = true); past data is gone.
Actual	Clean reset confirmed.

Figures

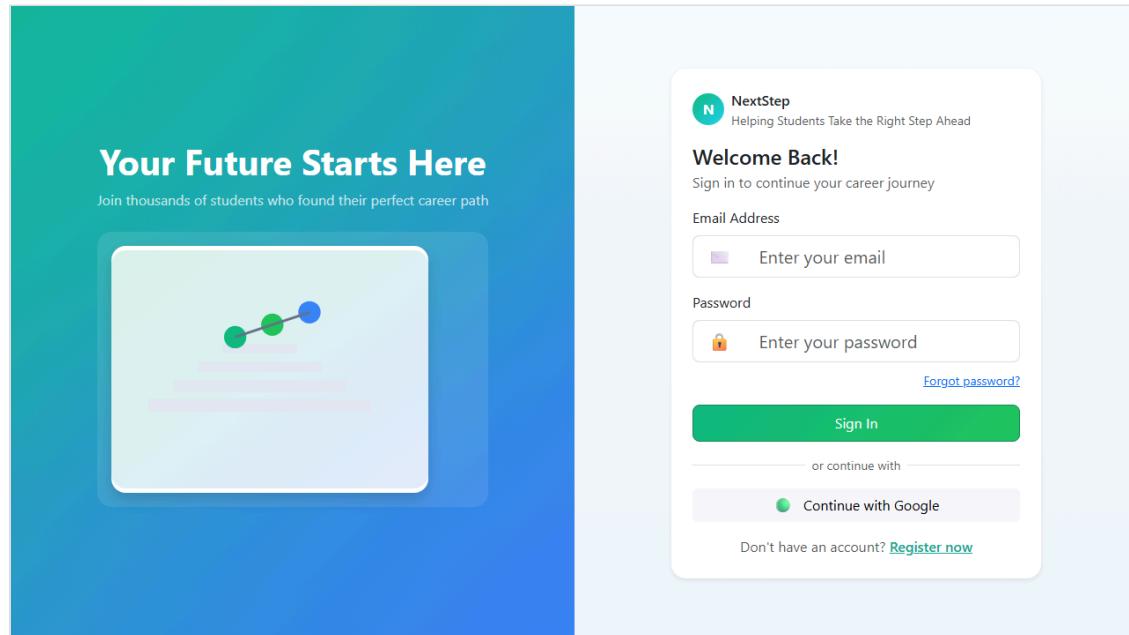


Figure 1 – Registration/Login.

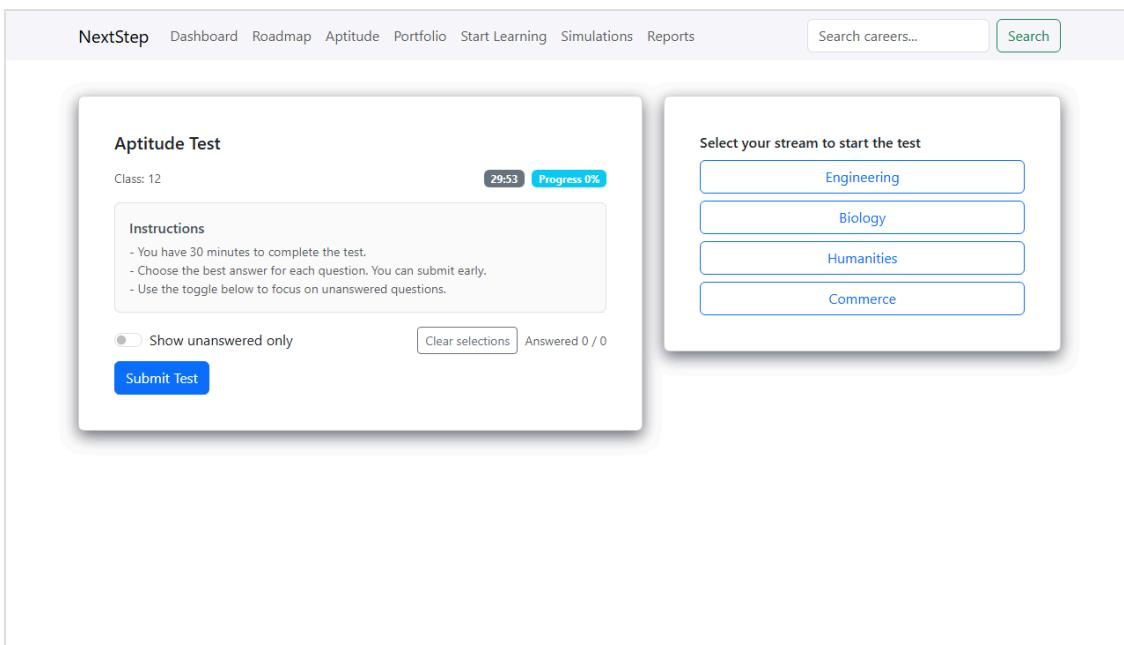


Figure 2 – Registration gating on /aptitude.

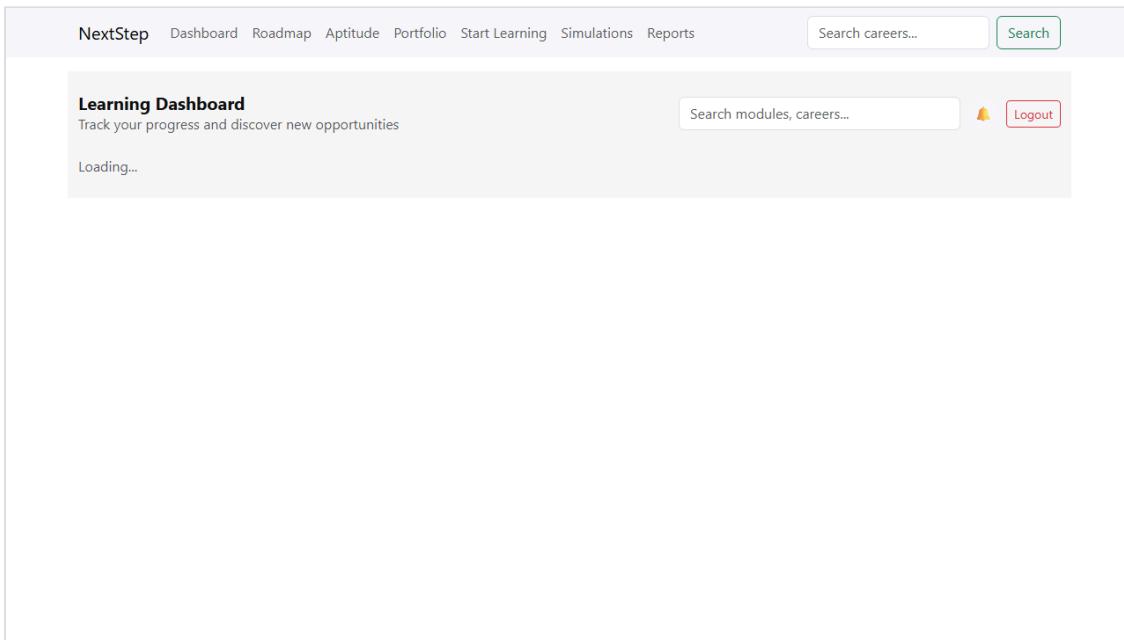


Figure 3 – Dashboard prompting to start test.

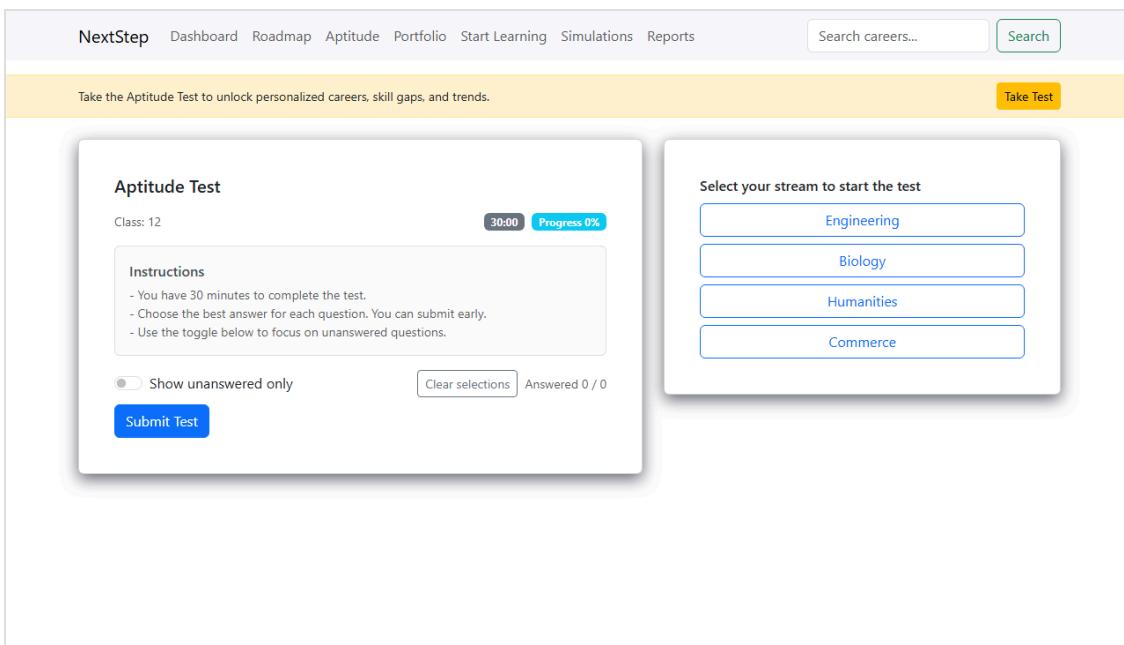


Figure 4 – Aptitude UI.

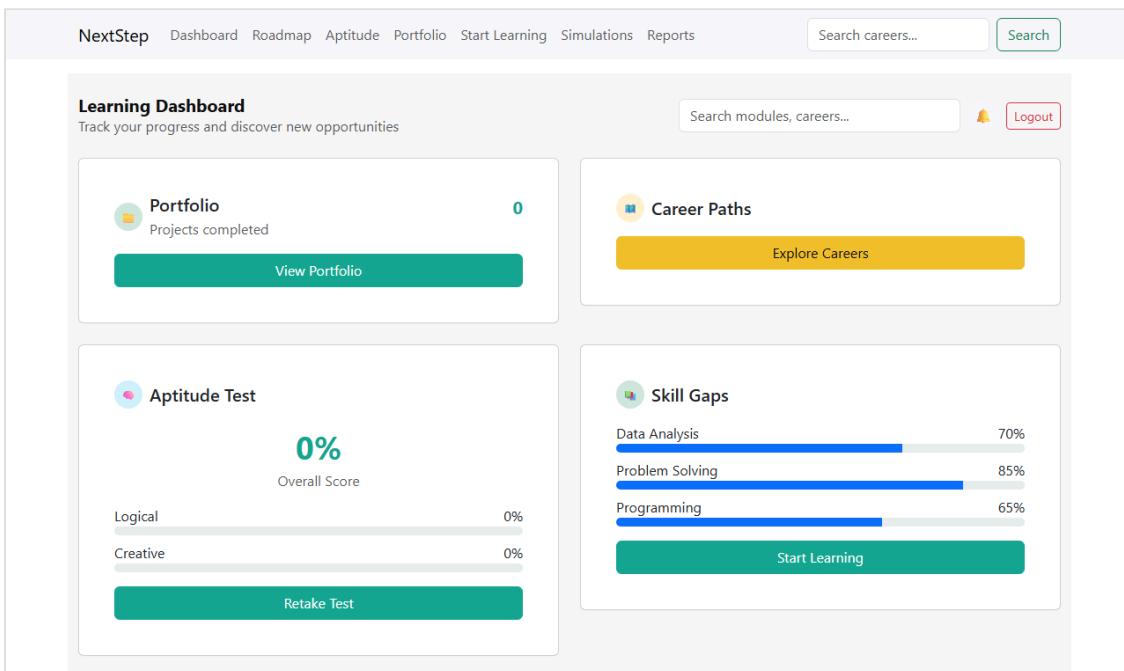


Figure 5 – Dashboard after test.

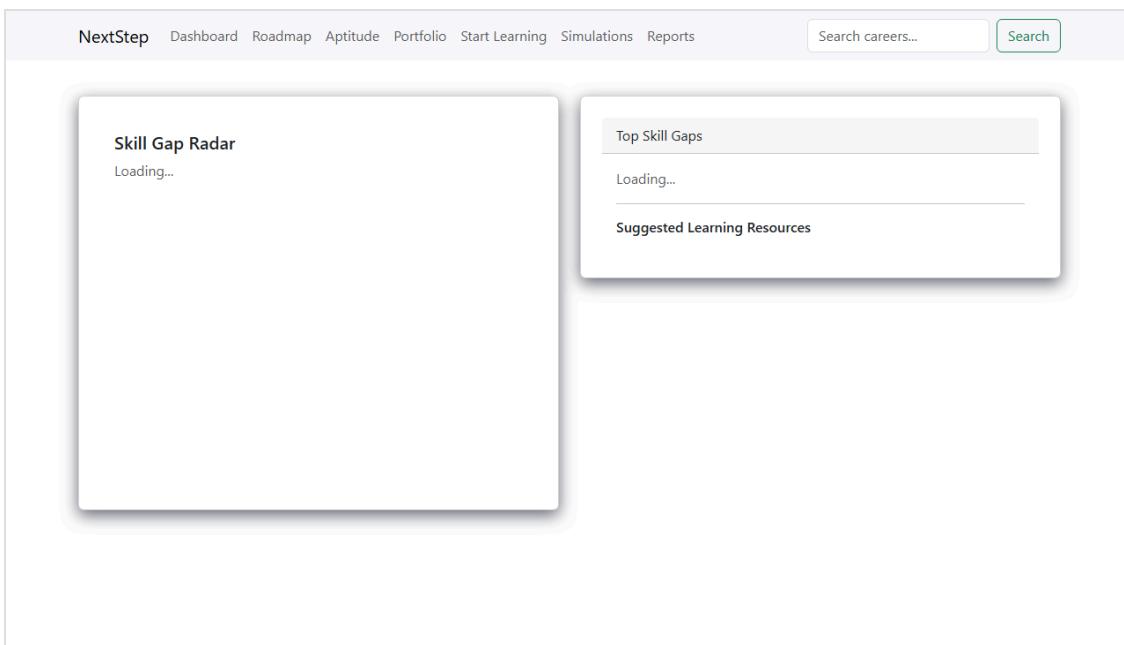


Figure 6 – Skill Gap.

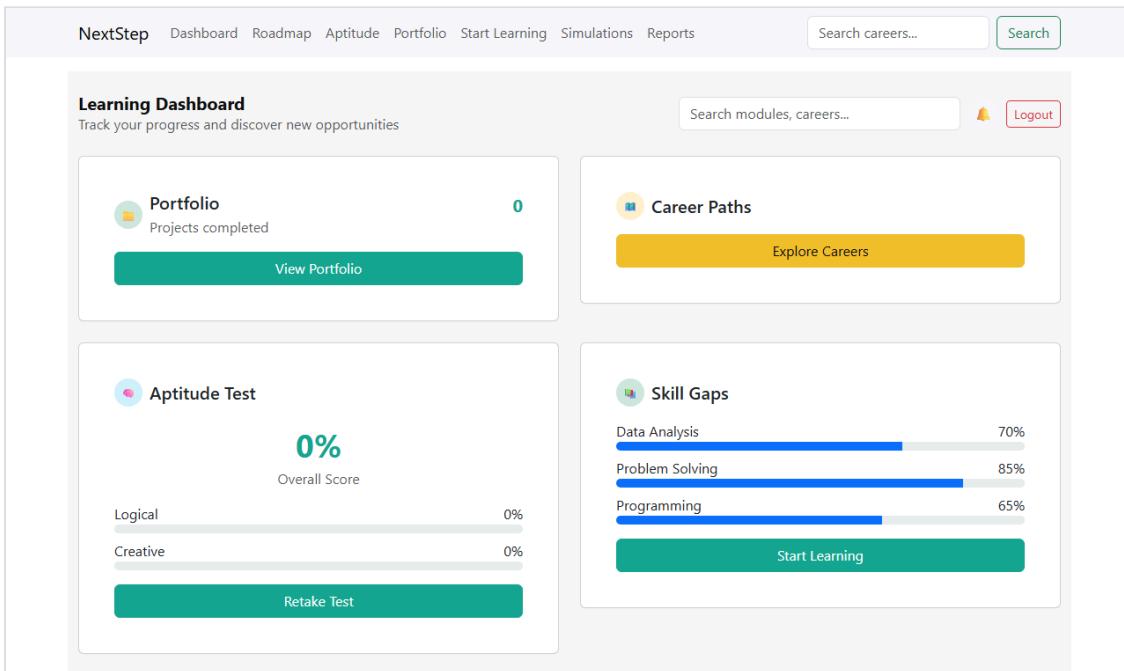


Figure 7 – Careers CTA only.

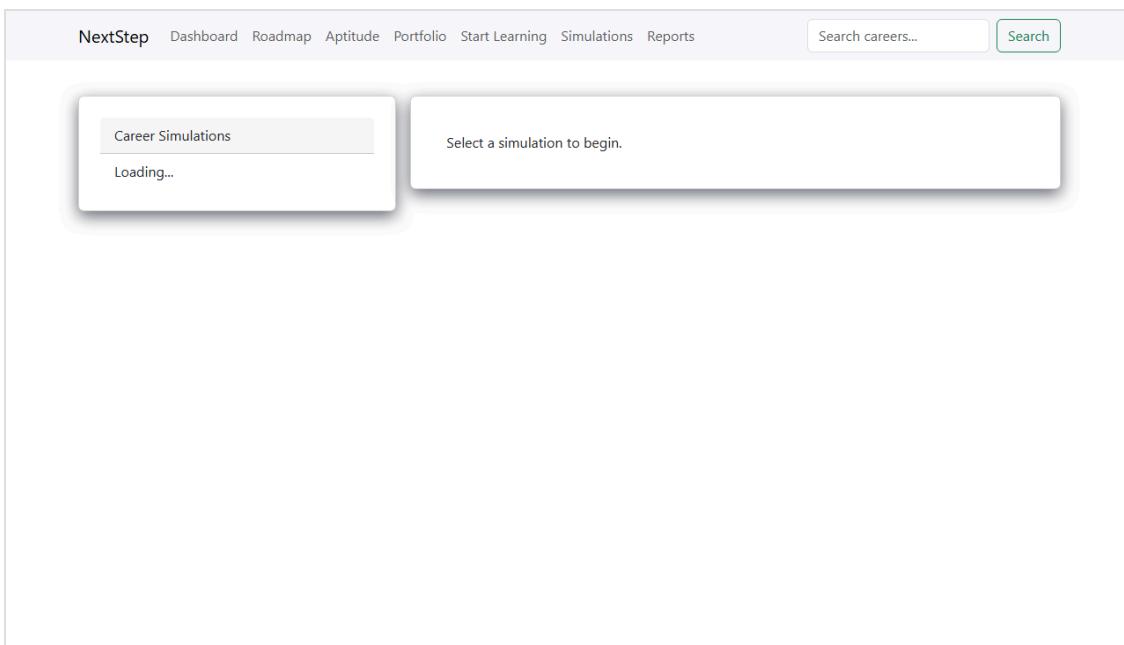


Figure 8 – Simulations.

The screenshot shows the NextStep interface after completing an aptitude test. At the top, there is a navigation bar with links: NextStep, Dashboard, Roadmap, Aptitude, Portfolio, Start Learning, Simulations, Reports. A green banner at the top right says "Aptitude Test Complete!" with a close button. Below the banner, a message says "Check your results and head to the dashboard." A yellow bar below the banner says "Take the Aptitude Test to unlock personalized careers, skill gaps, and trends." The main area has three main sections. The left section is titled "Aptitude Test" and includes "Class: 12", a timer "29:59", "Progress 0%", instructions ("You have 30 minutes to complete the test.", "Choose the best answer for each question. You can submit early.", "Use the toggle below to focus on unanswered questions."), a "Show unanswered only" toggle, a "Clear selections" button, an "Answered 0 / 0" counter, and a "Submit Test" button. The middle section is titled "Select your stream to start the test" and lists "Engineering", "Biology", "Humanities", and "Commerce". The right section is titled "Test Complete!" and says "What's Next? Your personalized career paths, skill gaps, and learning resources are now ready on your dashboard." It includes a "Go to Dashboard →" button. The bottom section is titled "Your Results" and shows "0%" overall score and an "Explanations" section stating "We show the correct answer for each question you attempted. Review and retry to improve your score."

Figure 9 – app:data:updated banner.

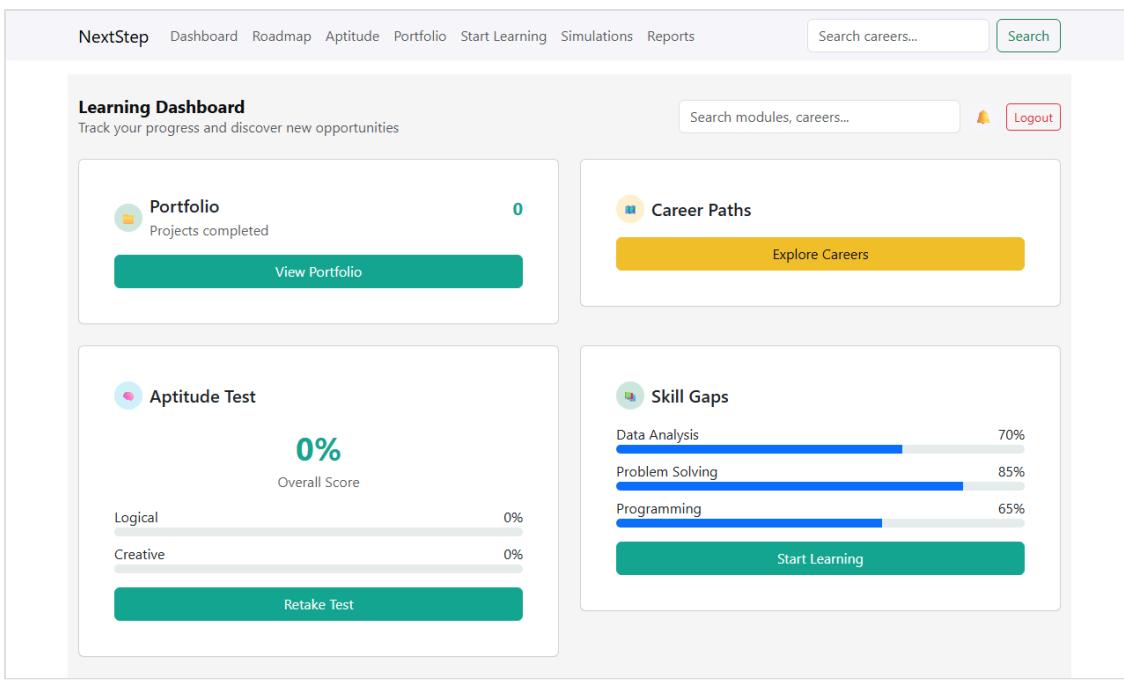


Figure 10 – Fresh dashboard.