

Informatics Institute of Technology

InfoSchol 2025 Induction Programme



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Lumo

Project Proposal

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ABSTRACT

Time management challenges among students often result in missed deadlines, stress, and unproductive study sessions. Existing planners lack adaptability to individual study patterns and shifting priorities. The proposed solution leverages AI and machine learning to create a personalized and continuously adaptive study schedule based on user behavior, subject importance, productivity levels, and deadline tracking. Features include real-time suggestions, automated reminders, smart rescheduling, and integration with digital calendars.

Development will follow the Scrum Agile Method, emphasizing iterative progress, user feedback, and incremental improvements. Multiple development cycles will incorporate evaluations and testing to refine functionality and ensure broad usability. The final system aims to enhance academic performance, reduce procrastination, and support stress-free, efficient study habits. It may also extend to professional and corporate time management scenarios, providing a scalable, intelligent solution aligned with modern technological demands.

This project aims to bridge the gap between traditional planning methods and modern AI-driven solutions, offering an innovative tool that aligns with the evolving needs of students in today's fast-paced, technology-driven world.

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1. PROBLEM DEFINITION & BACKGROUND

1.1. Problem Statement

Most students **struggle to reach their academic goals** because they lack a structured and personalized approach to planning and goal setting. Without the right support, procrastination sets in, focus fades, and progress stalls, even when motivation is strong.

Time is the most unrenewable resource in the world, and all we do is help students manage it better.

1.2. Problem Background

Around 80% of people don't reach their goals, not because they lack ambition, but because they lack structure.

In one study, students who wrote down their goals, broke them into steps, and shared progress had a 76% success rate, compared to just 43% among those who didn't follow a structured approach.

Still, nearly half say they don't have time, or find planning too overwhelming to keep up with it. It's not that students don't care. They're just caught in unproductive loops, without tools that make planning feel easy, motivating, and part of their day.

1.3. Research Background

Research consistently shows that most people struggle not due to a lack of ambition, but due to a lack of structure. A classic longitudinal study on New Year's resolutions found that while 77% of people stick with a goal in the first week, only 19% maintain it after two years—meaning around 80% fail to reach their goals over time (Norcross & Vangarelli, 1989). The biggest barriers? A lack of planning strategies, fading willpower, and poor environmental control.

In academic settings, structure clearly makes a difference. A study highlighted by Michigan State University Extension found that students who wrote their goals down, broke them into steps, and shared weekly updates had a 76% success rate, compared to just 43% among students without a structured approach (MSU Extension, 2014). This reinforces the importance of SMART goal-setting—where goals are specific, measurable, attainable, realistic, and time-bound.

Yet, structure alone isn't always easy to implement. According to a national OnePoll survey of 2,000 people, 48% say they don't set SMART goals regularly because they either lack time or find the process too overwhelming.

Beyond goal-setting, planning habits also influence other behaviors. A study in *Frontiers in Psychology* found a moderate negative correlation ($r = -0.51$) between planning and procrastination, suggesting that individuals who plan less are significantly more prone to delay tasks, especially in high-pressure domains (Zheng et al., 2022).

Further breaking down what "time management" really means, Macan et al. (1990) identified four distinct factors that influence academic performance and stress in students: (1) Setting goals and priorities, (2) Mechanistic planning and scheduling, (3) Perceived control over time, (4) Preference for organization. Despite knowing what works, students often lack tools that connect these proven strategies into a daily, intuitive flow. These gaps present an opportunity to design better systems, ones that make effective planning **accessible, motivating, and easy to stick with**.

1.4. In-Scope & Out-Scope

In-Scope: Core features essential to delivering a structured, motivating, and personalized learning experience.

1. Vision & Mission Setting with AI Guidance

Let users define a realistic 3–5 year personal or career vision, assisted by AI to make it.

2. Goal Definition with Smart Inputs

Users create goals by providing timeframes, availability, uploaded study materials, and more.

3. AI-Powered Goal Breakdown Engine

The AI auto-generates a full study plan: breaking goals into small actionable steps.

4. Task Dashboard with Prioritization

Users can sort daily tasks using an Eisenhower Matrix, and re-prioritize as needed.

5. Focus Timer & Task Tracker

A timer that tracks how long users work on each task creating time awareness.

6. Gamification system

Earn XP, streaks, badges, and diamonds as rewards for task completion and consistency.

7. Built-In Learning Guidance

For tasks give smart guidance like how to approach it, what to focus on, and what's expected to complete it.

8. Feedback on Weak Areas

AI detects weak topics and suggests revisions, adds supporting tasks, and adapts the study plan.

9. Flashcards from Materials

Make flashcards to support active recall and spaced repetition from learning materials.

10. Daily Reflections

Prompt users to reflect on energy levels, focus, and mood using science-based questions.

11. Group Collaboration & Chat

Work with friends or study partners; chat and share goals in-app.

12. Animated Bear Companion

A friendly 3D bear that reacts to progress, rests when idle, and celebrates achievements.

Out-Scope • In-Scope • Out-Scope • In-Scope • Out-Scope • In-Scope • Out-Scope • In-Scope

Out-Scope: Features that enhance the experience but are not critical for the initial product launch.

1. Full AI-generated lectures or deep tutoring systems

2. Offline mode and full mobile-native version

3. Integration with third-party learning platforms (e.g., Coursera, Khan Academy)

4. Long-term performance analytics beyond the immediate goals

1.5. User Pain Points

Students often find themselves overwhelmed by tight deadlines, distractions, and a lack of motivation. In fact, **our research of over 30 students** showed that many struggle with balancing work, study, and personal life. This highlights a clear need for a tool that helps students stay organized, focused, and inspired to reach their goals.

1. In the survey some students shared strong reasons for studying like “Getting a first or a second upper class,” “To do work-related tasks with ease and progress in career,” or simply “my future goals.” But others revealed a quiet gap: “Just exam,” “I don’t know tbh.” This mix shows a deeper pain point — many students either chase a dream or drift without one. And **without a clear why, even structured plans can feel empty.**
2. When life piles up, burnout isn’t far behind. One student admitted, ‘I took on too many commitments... deadlines piled up... I was overwhelmed’ — a clear sign that **even the most driven can feel lost without balance.**
3. Even when time is available, many students struggle to start. One shared, “Not in a mood... maybe because of the lunch,” showing how **even small dips in energy or structure can stall progress.**
4. Maintaining study plans can feel like a chore. As one student put it, “Maybe **updating the schedule every day** is the problem,” hinting at how the **effort to stay organized can itself become overwhelming.**
5. Digital planners often fall short when it comes to real-time support. As one student noted, “No notifications in Notion if you’re just using the databases,” showing how **missed notifications can throw off time-sensitive tasks.**
6. Students want tools that help them grow, reflect, and actively engage with their learning. One student suggested, “Would be great to have an AI-generated Q&A session after studying a certain topic,” emphasizing the need for **tools that go beyond basic planning.**
7. Many students try study tools but eventually give up when they feel too complicated. As one student shared, “Obsidian (a note taking and planning application) – **too complex for me**, I guess,” revealing how complex design can push students away.
8. **Ads, offline restrictions, and generic templates** can disrupt the flow of studying. A student noted, “Like the effectiveness... but online sources play ads,” reflecting the irritation with interruptions.

Above all, students want a study system that feels personal and easy to connect with — something they can truly stick to, not just use once and forget.

Together, these voices show a clear need: students don’t just need tools — they need support that understands them.



Figure 1- Our QR-based survey campaign to collect student feedback on their pain points. Over 20 participants scanned and responded.

2. Proposed Solution

2.1. One- Line Pitch

"Lumo Helps students stay grounded today — so they can reach the future they dream of."

2.2. Solution Overview

Lumo is a web application designed to **help students move from uncertainty to clarity by building a meaningful long-term vision** — and guiding them toward it, one step at a time.

It begins with students **setting their 3–5 year vision**, supported by AI to make it realistic, detailed, and motivating. From there, they **create personal goals**, upload learning materials, set exam dates, select available weekdays, add teammates, and choose their preferred working style. Once they hit "Make it," Lumo's **AI breaks everything down into clear, actionable tasks**.

Each day, students open their dashboard to see what matters most — and they can **prioritize tasks using an Eisenhower-style view**. When they start a task, a **timer tracks their time** while their learning companion, **a soft and supportive bear named Bare, brings encouragement and warmth** through animations and personality.

Lumo is also built for meaningful **collaboration**. Students can team up with friends or peers who share the same long-term goal — whether or not their task lists are identical. They can **view each other's progress, compare streaks and XP earned**, and stay motivated together. Each shared goal comes with a private space where they can upload and **share resources, chat in real time, and even ask the AI questions directly within the chat** — making learning more social, supportive, and engaging.

Progress isn't just about ticking boxes. **Students earn XP points, diamonds, and unlock milestones**. For deeper learning tasks, Lumo provides **step-by-step guidance, flashcards, and comprehension checks through engaging quizzes**. It also **keeps track of areas they're struggling with**, so improvement feels natural.

At the end of each day, students **reflect with science-backed prompts** — checking in on energy, focus, and mood — **helping them build** not just habits, but **self-awareness and resilience**.

Lumo isn't just a planner. It's a **deeply personal learning system that grows with the student**, supports their goals, and helps them thrive — so they don't just chase their future, they grow into it.

We've already taken the first step by launching our landing page at lumo.lk — inviting early users to explore and share their interest.



Figure 2 - Random Pic: One of those intense "how do we solve this?" meetings — and that's exactly how we came up with this solid idea, step by step.

2.3. Purpose & Impact

At its heart, Lumo exists to guide students toward the future they dream of — without losing themselves along the way.

In a world full of distractions and pressure, many students feel like they're just getting through the day. Lumo changes that by helping them define a clear 3-to-5-year vision and break it down into actionable, daily steps. We give students back their sense of direction, agency, and hope.

But it's more than just planning. Lumo nurtures self-belief, habits, and a deep connection to goals. With AI support, meaningful reflections, and moments of joy (like Bare cheering them on), students stay emotionally grounded and energized.

And the impact doesn't stop with one student. Lumo fosters a culture of shared purpose — where students support each other, grow together, and strive toward something bigger than themselves.

Our goal is to empower learners not just to study, but to thrive and make meaningful progress toward the life they envision.

2.4. Ethical & Social Impact

Lumo is built not just for academic success, but to support students' well-being and mental clarity — so they can truly reach their full potential.

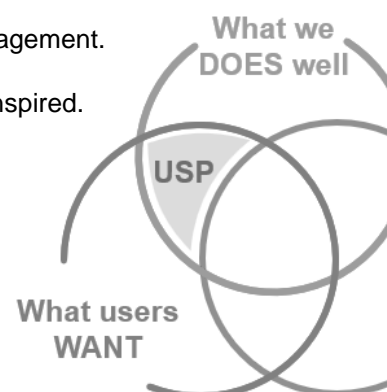
Research highlights the pressing challenges students face today: **67% report high stress** from balancing life and studies (American College Health Association, 2022), and **60% of students from low-income backgrounds lack access to quality educational tools** (Pew Research Center, 2021). Additionally, **78% say they need more emotional support** to manage academic demands (Active Minds, 2023), and **collaborative learners are 30% more likely to succeed** (National Education Association, 2020).

Lumo responds with accessible tools, emotional grounding, and a supportive community — helping every student grow, thrive, and move toward a brighter future.

2.5. Uniqueness & Special Features

What makes Lumo different is its mix of structure, spark, and vision — helping students turn big dreams into small wins every day.

- Lumo turns long-term dreams into daily actions through smart, personalized planning.
- It uses AI to break down goals, suggest tasks, and reflect on progress meaningfully.
- Gamified elements like XP, streaks, and level-ups keep motivation high.
- Emotional check-ins and reflections support mental clarity and self-awareness.
- Bare, our animated learning companion, adds warmth and playful encouragement.
- Built-in collaboration lets students share goals, study together, and stay inspired.



3. Market & Industry Analysis

3.1. Target Audience & Market Size

Primary Lumo's **primary audience** is **students aged 16-30**, ranging from **high school to university** level, and even **early-career professionals**. These individuals are navigating the complexities of education, career development, and personal growth — all while facing the pressures of time management, mental well-being, and academic performance.

The global education technology (**EdTech**) market is experiencing significant growth. In 2024, it was valued at approximately **\$163.5 billion** and is projected to reach **\$348.4 billion by 2030**, growing at a compound annual **growth rate (CAGR) of 13.3%**. (Grand View Research – *Education Technology Market Report*)

Additionally, the mental health apps market, which complements **educational tools like Lumo**, was **valued at \$6.28 billion in 2023** and is expected to **grow at a CAGR of 15.24%**, reaching **\$22.51 billion by 2032**. (SkyQuest – *Mental Health Apps Market Insights Report*)

These figures highlight a substantial and growing market for integrated educational and mental well-being solutions, underscoring the potential reach and impact of Lumo.

3.2. Market Potential & Importance

The growing demand for personalized, purpose-driven learning experiences has opened a massive window of opportunity in the EdTech space. As the **global EdTech market is projected to surpass \$478 billion by 2030**, **solutions that go beyond content delivery — toward building habits, motivation, and long-term vision — are more needed than ever**.

Students today face a unique set of challenges: information overload, lack of guidance, mental health pressures, and difficulty staying motivated in self-paced learning environments. Yet, most platforms still focus on what to study, not why or how to stick with it. This is where Lumo stands out — by addressing the root issues that impact student consistency and growth.

With a rapidly expanding global student population, rising digital adoption, and increasing openness to AI-assisted tools, the market is primed for solutions like Lumo that blend structure, emotional support, and collaborative growth. Our platform doesn't just fit into the EdTech market — it expands it by reaching students who don't just want to learn, but want to evolve.

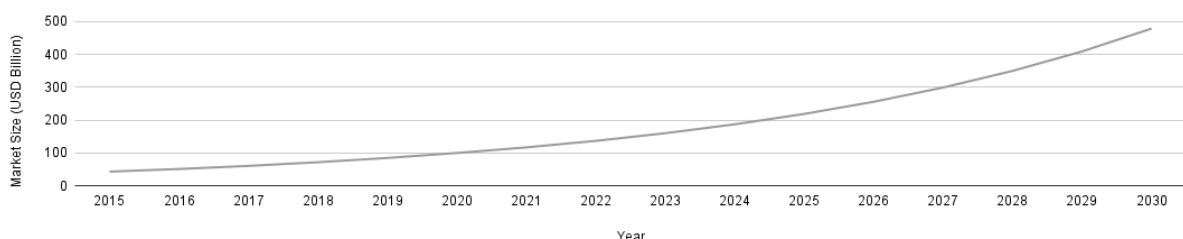



Figure 3- Global Education Technology Market Size (2022–2030), in USD Billion — Source: Research and Markets

3.3. Competitor Analysis & Differentiation

This is us 











































						
Vision-based Planning						
AI Task Suggestions						
Gamification (XP/Streak)						
Emotional Check-ins						
Collaboration & Shared Goals						
AI Chat & Goal Reflection						

Figure 4 - A detailed comparison highlighting the unique features offered by Lumo in contrast to other existing platforms. This visual illustrates areas such as gamification, user insights, community learning, and progress tracking where Lumo stands out signific

Most tools help students *plan*. Lumo helps them *believe*, *commit*, and *grow*. While others stop at structure, Lumo brings clarity, motivation, and human connection — turning planning into a journey students actually want to stick with. That’s where we stand apart.

4. Business & Financial Model

4.1. Business Revenue Model & Cost Structure

Lumo follows a freemium subscription model — offering essential planning tools for free, while unlocking powerful features like AI-driven breakdowns, collaborative goal spaces, personalized learning insights, and wellness tracking under a premium plan.

1. Subscription Plans

Fresh Start Free /month <ul style="list-style-type: none">⊗ Up to 5 personal goals⊗ Storage up to 1 GB⊗ Access to Bare - AI study buddy⊗ Daily planning dashboard⊗ Basic study tools⊗ Limited AI queries per day⊗ Join 1 shared goal with a friend⊗ Earn XP & streaks⊗ No credit card required	Pay As You Plan \$2.99 + /month <ul style="list-style-type: none">⊗ Included all in “Fresh Start” plan⊗ \$1 per extra goal/month⊗ \$0.50 / GB /month (up to 5 GB)⊗ Smart daily planning and priority⊗ Advanced study tools⊗ Unlimited AI queries⊗ Join up to 3 shared goals⊗ Full habit tracking	The Boss \$9.99 /month <ul style="list-style-type: none">⊗ Unlimited goals⊗ Unlimited file storage⊗ Pro-level dashboard⊗ All study tools unlocked⊗ Create unlimited shared goals⊗ Deep productivity insights⊗ Early access to new features⊗ live chat support
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2. Institutional Licensing (Out-scoped for initial prototype)

Institutional Licensing Custom /month <ul style="list-style-type: none">⊗ Bulk student access⊗ Centralized admin dashboard for instructors and coordinators⊗ Team creation & goal sharing across classrooms or learning groups⊗ Flexible cloud storage pooled across institution⊗ Performance insights for individuals and cohorts⊗ AI access included for students and teachers⊗ Real-time group chat + AI study assistant⊗ Data privacy compliance and priority support

Cost Structure: Lumo is built with scalability in mind, leveraging powerful cloud-native tools that keep fixed costs low and align most operational expenses with growth. Our current cost structure is as follows:

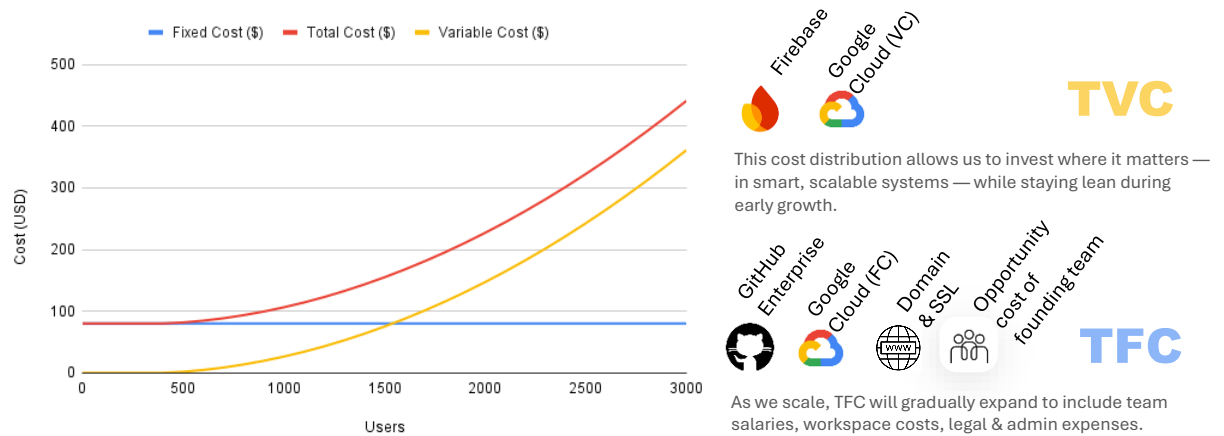
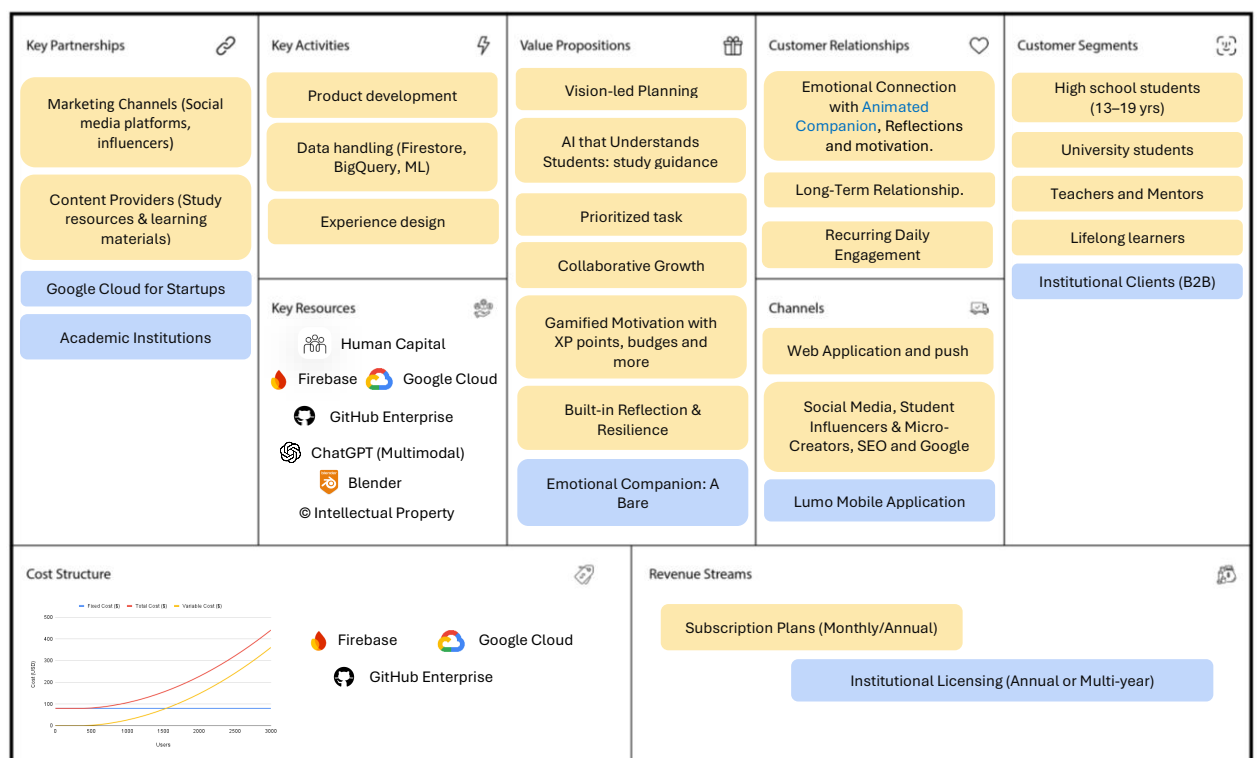


Figure 5 - Projected fluctuation of Fixed Costs (TFC) and Variable Costs (TVC) as user count increases from 0 to 3,000. The TVC curve accelerates beyond 400 users due to heavier database activity, AI services, and storage demands, while TFC remains relatively stable over the same period.

The Business Model Canvas



4.2. Initial Go-to-Market Strategy

Our go-to-market strategy **begins with post-MVP development**, not as a finished product, but as a living tool for learning.

Grounded in early user interviews, we identified key student patterns and selected the most aligned users for deeper **customer development**.

We'll roll out Lumo to this early community, not just to observe how they use it, but to co-create with them — **gathering both subjective feedback and objective behavioral data**. This iterative cycle of **feedback, learning, and improvement** ensures that Lumo is not just usable, but genuinely meaningful.

Our aim isn't just to acquire users, but to build trust. We want early users who don't just come back daily — but also become the ones who **recommend Lumo to others**, because it supports their goals and feels like it *gets them*.

That's when we know we've built our true MVP — not just something minimal, but something genuinely viable: a product that fits into students' lives and earns its place.

4.3. Partnerships & Funding Strategies

At this early stage, we are focused on forming strategic partnerships that don't just provide resources, but align with our mission of making long-term planning and self-guided learning more empowering for students.

Strategic Partnerships

- **Google Cloud for Startups** – Leveraging their support for infrastructure, scalability, and potential mentorship. Beyond just cloud credits, their startup outreach team often provides hands-on support and early-stage guidance.
- **Educational Institutions** – Collaborating with schools, teachers, and educational psychologists to test and co-develop features that are meaningful in real-world learning contexts.
- **Mentors & Alumni Networks** – Tapping into guidance, validation, and visibility through university incubators and startup ecosystems.
- **Community Champions** – Building early relationships with students and creators who believe in the mission and are eager to spread the word.

Funding Strategy

1. **Bootstrapping** through personal and team contributions.
2. **University Innovation Grants** or **local entrepreneurship funds** for MVP development.
3. **Competitions and Accelerators** that offer seed support, mentorship, and exposure.
4. **Early-stage Angel Investors** who align with our values and long-term vision.

5.Implementation

5.1. Tech Stack (Overview)

Lumo is built using a modern, scalable, and developer-friendly stack designed to support personalization, collaboration, and intelligent automation at scale.

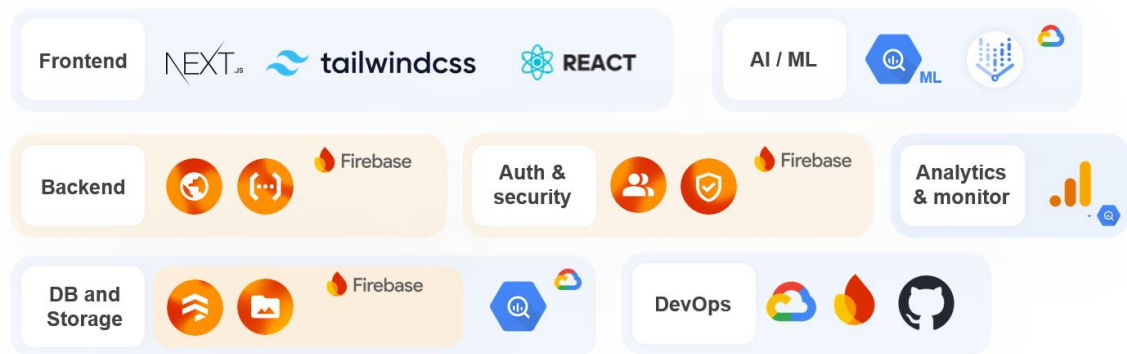


Figure 6 - A visual overview of Lumo's tech ecosystem — combining modern frontend tools, serverless backend infrastructure, secure user management, real-time data handling, and AI-powered insights — all built for performance, personalization, and growth.

5.2. Impact on Stakeholders

At Lumo, we design with the belief that true impact comes from understanding and serving the people at the heart of our ecosystem. This stakeholder map highlights the relationships that shape and sustain our mission — from students, educators, and parents who drive demand, to the funders, platforms, and partners who support our growth. By visualizing this network, we stay grounded in empathy while aligning strategically with those who help us build, deliver, and continuously improve meaningful value.

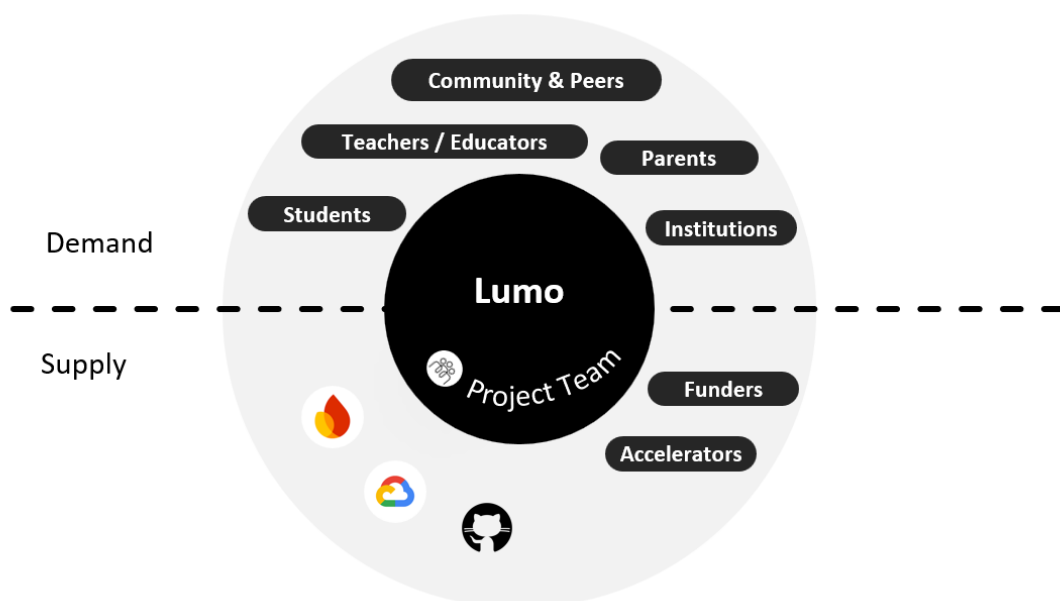
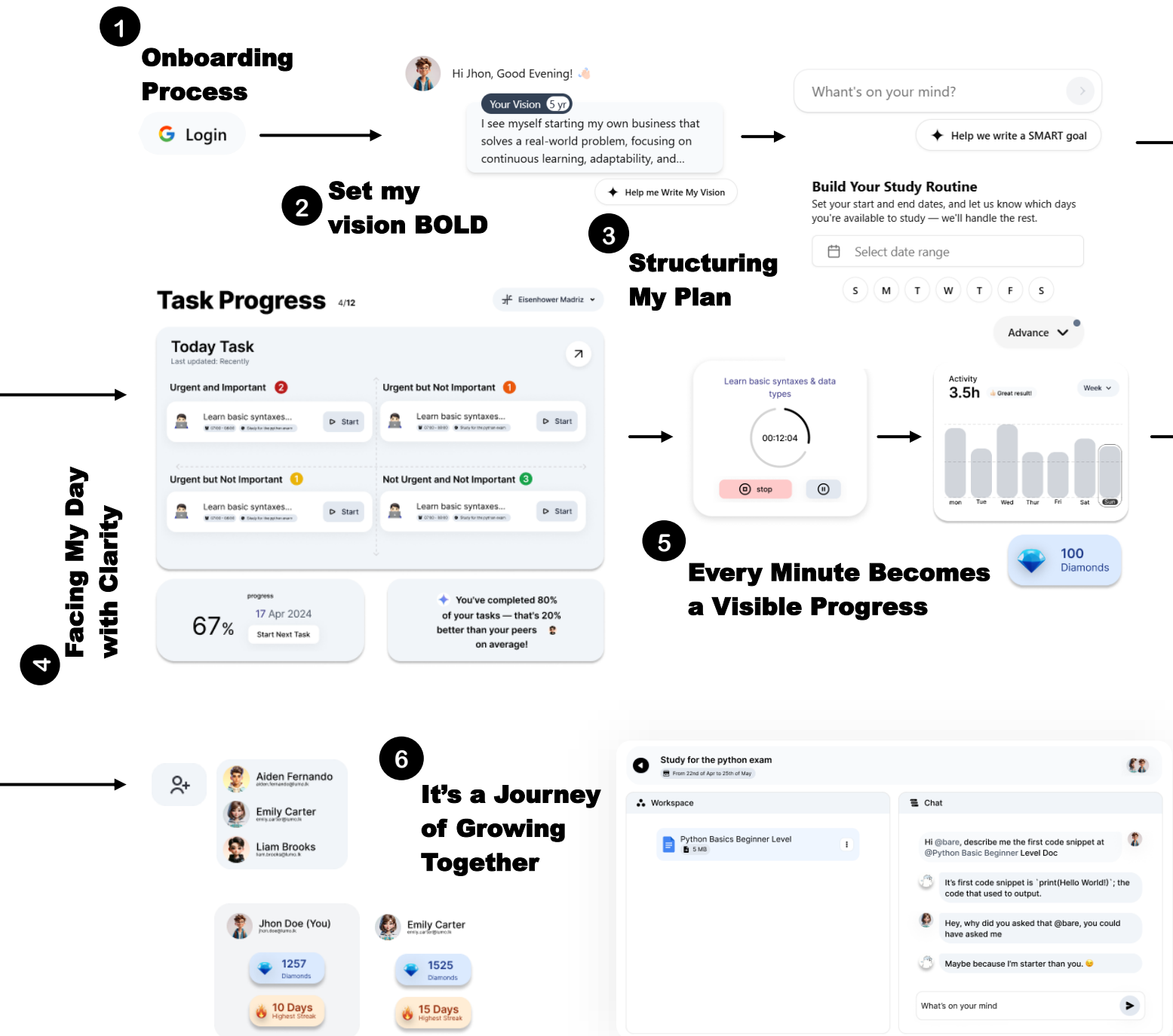


Figure 7 - Lumo is situated at the intersection of student needs and technological enablement. Our stakeholder map reflects the dual ecosystem of demand and supply, aligned around co-creation and trust.

5.3. Real-World Scenarios & User Journey

Every meaningful product begins with a story. In this section, we visualize how students experience Lumo, step by step. Through carefully mapped user flows and intentional design choices, we highlight the moments that matter most — building shared understanding and setting a strong foundation for agile development.



Time remaining
00:09:20

Submit

3

question
out of 10

What would be the value of the 'result' variable after executing the following Python code?

```
def func1(a,b):
    return a+b
def func2(a,b):
    return a*b
result = func1(3,func2(2,4))
```

1 11

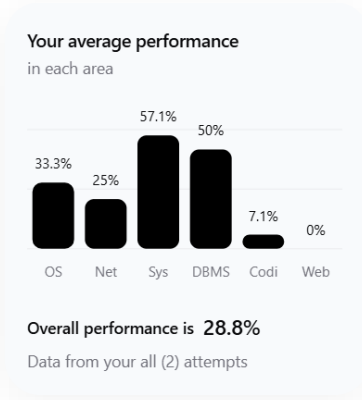
2 12

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Prev

Next



7 Learning with Depth & Joy

8 Ending the Day with Insight

On average, how energized did I feel today?

1

2

3

4

5

Absolutely drained

☐

☐

☐

☐

☐

Fully energized

End

Which best describes how you felt most of today?

high energy and high pleasant

low energy and high pleasant

high energy and low pleasant

low energy and low pleasant

What happened today?

How did it make me feel?

Why did I react that way?

What will I do differently tomorrow?

What did I learn?

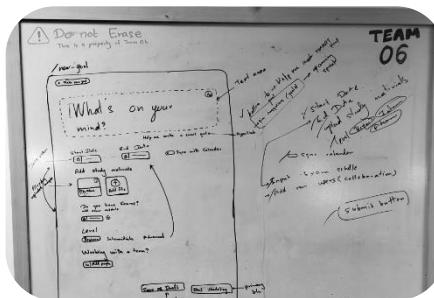
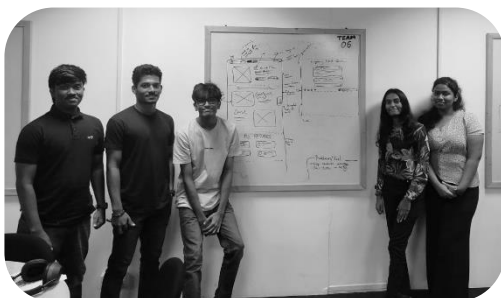


Figure 8 - From whiteboard chaos to Figma finesse — powered by coffee, confusion, and occasional moments of brilliance. This is how lumo went from 'what even is our idea?' to 'let's build this thing!'

5.4. Prototype Roadmap

We're in this for the long run — which means our prototype roadmap is just getting started. But... with a strict 15-page limit, we couldn't quite squeeze it in here without asking the UI to scoot over awkwardly.

So! You'll find the full roadmap (and all its beautiful ambitions) waiting patiently for you in the **Additional and Supportive Materials**.

6. Additional and Supportive Materials

Too bold to fit within the 15-page limit — you'll find our **Prototype Roadmap** tucked away safely in the zip under **prototype-roadmap.pdf**. Because let's face it: when our roadmap is *this* ambitious, it deserves its own room.

7. Team



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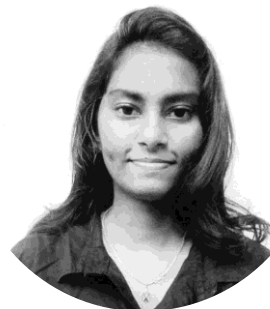
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