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Mentr: A Modular, On-Demand Mentorship Platform for Personalized Learning and Guidance

Muskaan Juneja / Pearl Juneja
Founder - Mentr & Wiseversity

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Abstract: Most mentorship and coaching programs today operate on a broken model - they bundle everything together and assume everyone needs the same help. Whether you're studying for competitive exams or navigating career changes, you're forced to pay for comprehensive packages even when you only need guidance in specific areas.

We experienced this problem firsthand. While preparing for civil services, one of us needed help only with modern history and parts of geography, yet had to enroll in expensive full-scale programs covering subjects she'd already mastered. Our other co-founder struggled to find relevant mentors through existing professional networks when facing crucial career decisions.

These frustrating experiences aren't unique. A survey of our 200,000-member community revealed that over 85% prefer personalized mentorship over generic coaching programs, highlighting a massive gap in the market.

Mentr addresses this problem directly. It's an on-demand mentorship platform where users can book live video calls with experts, join immediate sessions with available mentors, or access targeted video content - all focused on their specific needs. Rather than paying for unnecessary content, users get precise help when they need it.

Our platform uses AI-powered matching to connect mentees with relevant mentors based on their queries, not just keyword searches. We've built a modular system that scales individual components independently while maintaining quality through strict mentor vetting and continuous feedback analysis.

With plans to onboard 100+ mentors in year one, Mentr

represents a fundamental shift toward accessible, personalized guidance that eliminates the inefficiencies of traditional bundled coaching models.

KEYWORDS:

On-demand learning, AI-powered mentor matching, Modular education platforms, Competitive exam guidance, Digital mentorship solutions, Affordable expert access, Career and life-stage coaching, Edtech innovation, Real-time mentor connectivity.

1. INTRODUCTION:

We all know that moment when you desperately need guidance but can't find the right person to help. Maybe you're cramming for a competitive exam, stuck on a career decision, or trying to reinvent yourself at 40. Good mentorship can be life-changing, but finding it? That's where things get complicated.

The problem isn't that mentorship doesn't exist - it's everywhere. But most of what's available today is frustratingly rigid. Coaching institutes want you to sign up for their complete program even if you only need help with one subject. Online platforms offer these massive courses that assume everyone starts from zero and learns at the same pace. It's like being forced to buy an entire encyclopedia when you just need to look up one thing.

This hits close to home for us. When one of our co-founders was preparing for the civil services exam, she knew exactly what she struggled with - modern history and certain geography topics. But to get help with just those areas, she had to pay for comprehensive coaching that covered ancient history, political science, economics, and everything else she already knew. It was expensive, time-consuming, and honestly pretty frustrating.

Our other co-founder had a different but equally annoying experience. Picture this: you're at a career crossroads, you know you need advice, but LinkedIn just shows you thousands of profiles with no real way to connect meaningfully. Sure, you can send a message, but most people don't respond, and even if they do, there's no structure for actually getting help when you need it most.

These weren't just our problems - they seemed to be everyone's problems. So we decided to test this theory. We surveyed our community of over 200,000 students and professionals, and the results were pretty clear: more than 85% said they'd much rather have personalized mentorship than generic coaching programs.

That's how Mentr was born - out of genuine frustration with the status quo and clear evidence that people wanted something better. We built it as a modular, on-demand platform where you can get exactly the help you need, when you need it. Want to understand a specific concept? Jump on a call with an expert. Need career advice? Book a session with someone who's been there. It's mentorship without all the unnecessary baggage.

1.1 What we're trying to accomplish with this paper is pretty straightforward:

First, we want to show exactly how current mentorship systems fail people and why that matters.

Second, we'll walk you through how Mentr actually works and why we think it's a better approach.

Third, we'll share what we've learned from real users - the feedback, the data, and the early results that suggest we might be onto something.

This isn't just another platform or another academic exercise. We're trying to fundamentally change how people access guidance and support. Instead of forcing everyone into the same mold, we're building something that adapts to what each person actually needs. It's more personal, more accessible, and frankly, more human than what exists today.

2. METHODOLOGY:

The Mentr platform is implemented as a modular web application with a distinct front-end and back-end. A modern JavaScript framework (e.g. React or Angular) is used for the client-side interface to ensure a responsive, interactive user experience across browsers and devices. The back-end employs a microservices architecture, where separate services manage key domains (e.g. user authentication/profiles, scheduling, payment, content). For example, a User Service handles

login, profiles and access control, a Scheduling Service handles calls and calendar syncing, and a Payment Service processes transactions. These services communicate via well-defined APIs (e.g. REST or GraphQL), and use a hybrid data storage strategy (SQL for structured data like profiles and calendars, NoSQL or object storage for session logs and videos). This three-tier design (client, server, database) allows Mentr to scale components independently and integrate external AI and streaming tools seamlessly. For instance, live video sessions are handled by a dedicated media pipeline (ingest, real-time transcode, CDN delivery, recording) similar to practices in video-enabled platforms. Overall, the architecture supports on-demand AI search, instant video conferencing, and dynamic content delivery while remaining maintainable and extensible.

2.1 Key Features:

Mentr's minimum viable product (MVP) includes three core features that actually make personalized mentorship work:

- **AI-Powered Mentor Matching:** We've built a smart matching system that connects what you're asking with the right mentors. When you submit a question or topic, our system uses OpenAI's **natural language processing** to figure out what you really need help with not just matching keywords. The system looks at mentors' profiles, their expertise tags, what they've talked about in past sessions (video transcripts), and their video content. Our machine learning goes way beyond basic keyword matching: it weighs different factors like how experienced a mentor is and how well their skills match your question, getting better at recommendations over time. By using these Large language models (LLM's), we're cutting out the manual work and actually connecting people who can help each other.
- **Instant Booking and Live Calls:** You can book one-on-one video calls with mentors straight through our platform. The booking screen shows each mentor's available times and handles payment securely to lock in your session. Once you've booked, we automatically send calendar invites to both of you. But here's the cool part - if a mentor is online right now, you can jump into a live call immediately without booking ahead. Our live sessions use low-latency streaming technology(WebRTC/RTMP pipelines) so the video and audio quality stays crisp in real-time. We record these sessions (see Feedback below) and you might get extras like shared notes or live chat during the call.
- **On-Demand Video Content:** Besides live conversations, mentors can upload pre-recorded lessons and FAQ videos to the platform. We index and tag these videos by topic, so when you search for help, you'll see relevant mentor videos alongside live mentors and booking options. Our video system supports modern formats and adapts streaming quality based on your device and connection. By mixing live calls with a library of mentor-created videos, we're giving you both real-time help and content you can watch anytime.

2.2 Mentor Onboarding and Verification:

To maintain high quality, all mentors on Mentr undergo a strict vetting process. Initially, the project team conducts targeted outreach through professional networks (LinkedIn, industry conferences), social media (Instagram, Twitter), existing coaching communities, and personal referrals. Prospective mentors are required to submit documentation of their expertise (such as resumes, certifications, or portfolio links). Each application is manually reviewed by administrators: credentials and experience are checked before granting approval. This manual vetting mimics the approach of reputable paid mentorship platforms, where mentors often undergo interviews or testing before being accepted. Over time, as the platform grows, we will open the mentor application process to the public. This expansion will be supported by influencer partnerships and word-of-mouth marketing to attract qualified professionals. In summary, early mentor recruitment relies on networked outreach and careful credential review, and later stages will broaden recruitment while preserving vetting standards to ensure trust and quality.

2.3 AI Matching Process:

The core of Mentr's matching functionality is an AI-driven NLP pipeline built on OpenAI language models and related tools. The processing flow includes:

- **Query Parsing & Keyword Extraction:** When you submit a question or topic, we send your text to an

OpenAI model like GPT-4, which analyzes it to figure out the key concepts, topics, and what you're really trying to accomplish. This converts your natural language question into structured keywords that represent what you need help with. These LLM-powered tools have proven really effective at pulling meaningful information from casual, free-form text.

- **Similarity Matching:** We take those extracted keywords and match them against our mentor database and content library. Our system computes relevance scores by comparing your query to mentor expertise profiles, transcripts from their past sessions, and descriptions of their videos. The AI algorithm ranks mentors by how well they fit your needs - for instance, prioritizing mentors whose skills closely match your question topics. We use a "near-peer" matching approach, looking for mentors who are just a step ahead of where you are so their guidance hits the sweet spot. The system also factors in availability for live sessions and your preferences like industry focus or communication style.
- **Feedback Sentiment Analysis:** After every session, we ask you for feedback. We run those written reviews through OpenAI's sentiment analysis tools to score them as positive, neutral, or negative. This helps us measure session quality and spot potential issues. Research shows that analyzing student feedback reveals valuable insights about teaching effectiveness. On Mentr, any strongly negative feedback automatically flags the session for our moderators to review. When processing your initial questions though, we focus on topic relevance rather than the sentiment of what you're asking.

Throughout this process, the OpenAI API serves as a flexible NLP engine for text understanding. For example, it can be used to detect subtle topic keywords or to summarize content for indexing. The overall matching pipeline combines these AI-derived signals to recommend mentors and content that best address the user's request.

2.4 User Journey

The typical user flow for a mentee on Mentr is as follows and as shown in Figure 1:

1. **Search Query:** The mentee enters a question or subject into Mentr's search bar. This can be a specific question (e.g. "How do I improve my public speaking skills?") or a broad topic (e.g. "product management").

2. **Search Results:** The system parses the query and returns three categories of results:
   - **Live Mentors (now):** A list of up to three mentors who are currently online and available in the relevant field. The mentee can click one to join an instant video call.
   - **Video Content:** Thumbnail results of recorded videos from mentors tagged as relevant to the query. These might be micro-lessons or advice segments that the mentee can watch immediately.
   - **Mentor Profiles (booking):** A list of experienced mentors matching the topic, showing brief bios and availability. Each profile has a "Book Session" option.

3. **Booking and Payment:** If the mentee chooses to book a mentor, they select a time slot in that mentor's calendar. The platform then initiates a secure payment transaction (via the integrated payment service. Upon successful payment, the session is confirmed and calendar invites are automatically sent to both mentor and mentee. If instead the mentee opts for a live mentor, they are connected immediately (subject to the mentor's acceptance).

Throughout this journey, Mentr presents results that blend synchronous (live) and asynchronous (video) learning paths. The search results interface is designed for clarity, showing each option type in separate sections. Importantly, the entire booking process is integrated with standard e-commerce and calendar infrastructure, as in scalable learning platforms[19].

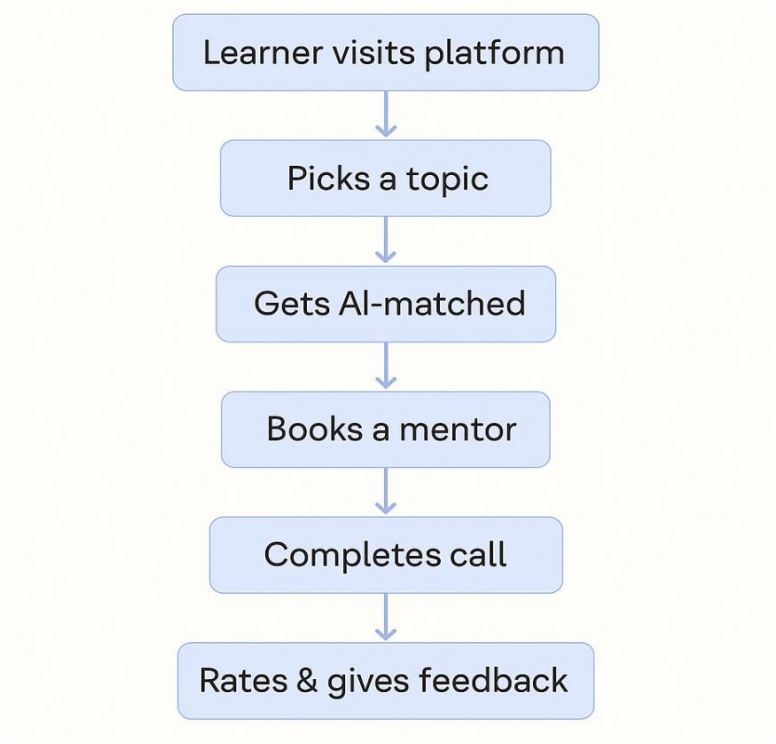

Figure 1: Mentorship user flow in Mentr

2.5 Feedback and Moderation

After each live or booked session, Mentr encourages the mentee to leave a review. To maximize participation, the platform offers incentives (e.g. credits toward future calls) for submitting feedback. The review form collects a star rating and an optional comment. Once submitted, the system performs automated sentiment analysis on the text. This analysis serves two purposes: assigning an objective quality score to the session and flagging any negative experiences that require human attention. For example, if a mentee's comment includes critical remarks, the sentiment analysis will score it negatively and send the record to moderators.

Additionally, all live calls on Mentr are recorded by default (with prior consent) and stored temporarily. Recordings are kept for a limited window (approximately 10–30 days) before automatic deletion, aligning with data-minimization practices. These recordings serve as a quality assurance measure: administrators can review any flagged session or investigate disputes and refund requests. The importance of recording sessions for later review is well-established in online learning management, as it allows platforms to audit instruction quality and identify issues[14].

In summary, Mentr's moderation pipeline combines incentivized user feedback with automated NLP analysis. Positive sentiment reinforces mentor credibility, while negative sentiment triggers follow-up. This continuous feedback loop helps maintain high quality: mentors can be guided or removed if patterns of poor reviews emerge, and the system can iteratively improve matching and content based on user satisfaction trends.

2.6 Validation Plans

To validate the Mentr platform, we plan a phased pilot with an existing community of approximately 200,000 members (e.g. a large professional network or learning community). An initial prototype of the web app is already functional for testing key workflows. In the pilot, community volunteers will use Mentr to seek mentorship on various topics. We will collect quantitative metrics (e.g. number of matches, session bookings) and qualitative feedback (surveys, usability interviews) on the matching accuracy and user experience. This pilot data will inform refinements to the algorithms, UI, and onboarding process before a broader launch. In parallel, mentors recruited during the pilot will provide insights on platform tools (scheduling, video creation) and suggest improvements. By iteratively testing with a real user base, we aim to validate our methodology and ensure that Mentr's architecture and

features effectively support personalized, on-demand mentorship.

Sources: Methodology descriptions and design choices are informed by best practices in educational technology and AI-driven mentorship platforms[15,16,17]. OpenAI's GPT models are used for core NLP tasks, as they have demonstrated strong performance in text extraction and classification relevant to this application[18].

3. Literature Review and Research Gap:

In recent years, the demand for mentorship and personalized learning support has grown significantly, leading to the rise of edtech and professional development platforms such as **Unacademy**, **Leland**, and **LinkedIn Learning**. These platforms have made it easier to access educational content, connect with instructors, and upskill across a range of subjects. However, a closer analysis reveals critical limitations in their approach to mentorship and individualized support.

Unacademy, while widely used in India for competitive exam preparation, operates primarily on a **broadcast model**, where students subscribe to structured, pre-set courses. The approach is largely **one-size-fits-all**, offering little flexibility to learners who may need targeted help in specific subjects or concepts. Similarly, **Leland**, which positions itself as a marketplace for coaching in careers and MBA admissions, caters mainly to elite segments and lacks **instant access or on-demand availability**, making it inaccessible for learners in urgent need of personalized guidance.

Moreover, these platforms tend to emphasize **academic or career-specific coaching**, overlooking mentorship needs in **non-traditional or life-stage transitions**, such as professionals pivoting careers in their 30s and 40s, or individuals seeking purpose-aligned guidance. There is a notable absence of platforms that combine **affordability, verified experts, AI-powered matching**, and **live, on-demand mentorship** accessible to a broader demographic.

This reveals a **research and implementation gap** in the current mentoring landscape: despite the proliferation of digital learning tools, there remains **no scalable platform that offers modular, real-time, affordable, and personalized mentorship across diverse life needs**. Current models do not adequately address the need for **micro-learning moments**, **goal-oriented guidance**, or **instant access to niche experts**. This is the gap that *Mentr* is designed to fill.

4. RESULT AND DISCUSSION

Although *Mentr* is still in its pre-launch phase, we have identified a clear set of early outcomes and success metrics that will guide our platform's evaluation in the first 6–12 months. These expected results are grounded in community insights, user polling, and current market analysis.

4.1 Anticipated Outcomes (6–12 Months):

1. **500+ mentorship sessions completed** across competitive exams, career guidance, and personal development categories.
2. **90% learner satisfaction rate**, measured through post-session feedback and sentiment analysis.
3. **High conversion rate from free/live sessions to paid calls**, indicating value delivery and user trust.
4. **Organic mentor onboarding**, especially from our existing 200K+ community, through word-of-mouth and social proof.
5. **Strong mentor retention**, encouraged through a transparent revenue model, user reviews, and community recognition.

4.2 User Impact & Anecdotal Success:

Success for *Mentr* goes beyond metrics, it lies in **real outcomes** that change lives:

- A learner finally cracks a competitive exam because they got help on **only** their weak subject.
- A young professional pivots to UX design at 35 because they could book calls with real experts in the field.
- A mentee builds a lifelong relationship with a mentor who "just gets them."
- Someone gets into the **university of their dreams** or lands their **dream job**, all because

they had guidance at the right moment from someone who's been there.

4.3 Comparative Landscape & Differentiation:

Compared to traditional coaching institutes, **Unacademy**, **LinkedIn Learning**, or **Coursera**, Mentr's pricing and experience model is fundamentally different. Most alternatives offer bundled, rigid learning paths. Mentr is tailored and **on-demand**, giving learners the power to **pay only for what they need**, no unnecessary modules, no time wasted, no filler content.

By integrating **AI-powered mentor matching**, **verified experts**, and **real-time access**, Mentr sets itself apart as an affordable, flexible, and life-stage inclusive solution, designed not just for students but for **anyone seeking transformation**.

5. CONCLUSION AND FUTURE SCOPE:

The demand for personalized, flexible, and affordable mentorship has never been greater. From students tackling competitive exams to professionals navigating career transitions at 30, 40, or 50, the lack of targeted guidance continues to be a pervasive gap in the education and career ecosystem. *Mentr* seeks to address this gap by offering a **modular, on-demand, AI-powered mentorship platform** that ensures users get **only what they need, when they need it**, without the clutter or cost of bundled content.

Our platform is built on the belief that mentorship is not one-size-fits-all. With real-time mentor access, personalized AI-matching, verified expert onboarding, and user-centric feedback loops, *Mentr* aims to reimagine how people learn and grow across all life stages. In doing so, it not only empowers the learner but also creates meaningful income opportunities for mentors.

While our current focus is on launching with a cohort of 100+ mentors in the competitive exam space, the platform is inherently scalable. Future expansions include:

- **Sector-wise diversification** into career guidance, startup mentorship, wellness, and life transitions.
- **Product enhancements** such as in-app chat, asynchronous voice replies, gamification, and AI-driven career journey maps.
- **AI model optimization**, eventually moving from OpenAI APIs to proprietary in-house models for better personalization and privacy.
- **Building a social graph** of mentors and mentees for enhanced discovery and long-term relationships.

In conclusion, *Mentr* is not just a product, it is a movement toward **accessible expertise**, **targeted transformation**, and **democratized guidance**. We envision a world where mentorship is no longer a privilege or a lucky accident, but a tap away, custom-fit for every learner's need.

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