#### **Product Requirements Document: AI Reel Coach for Small Businesses**

TemplateInstructions: This template follows industry best practices from major tech companies. Replace bracketed placeholders with your specific content. Each section includes guidance on what to include.

## **DocumentInformation**

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# **©** Executive Summary

**Problem:** Small businesses struggle to create engaging short-form video content

(Reels) consistently, due to lack of time, expertise, and creative confidence.

**Solution**: An Al-powered coaching tool that helps small business owners script,

storyboard, and produce effective Reels tailored to their niche.

**Impact:** Increase engagement rates on social media by 30% within months.

Investment: 4-week development sprint, requiring 1 Product Manager, 2 Engineers, and 1 Designer.

## **III** ProblemStatement

#### **Current State Analysis**

- 65% of small business owners report difficulty creating consistent video content.
- Average time to create a Reel manually is ~2–3 hours per video.
- Less than 20% of small businesses use Reels consistently despite its high engagement potential.

#### Points:

#### **Time-consuming production:**

- Manual scripting, filming, editing—avg. 2–3 hrs per Reel.
- 70% of surveyed small businesses say they can't produce at needed frequency.

#### Lack of creative expertise:

- 60% of owners don't feel confident writing effective marketing scripts.
- Often leads to low-quality, low-engagement videos.

#### **High outsourcing costs:**

- Professional video production services average \$100–300 per Reel.
- Not sustainable for small businesses with limited budgets.

#### **Root Cause Analysis**

- Limited marketing staff or solo founders must wear many hats.
- No affordable, easy-to-use tools to generate quality scripts and storyboards automatically.
- Lack of training or creative confidence in video marketing best practices.

#### **Cost of Inaction**

- 2 Missed Growth Opportunities: Small businesses risk losing 30-50% potential reach on social media by failing to leverage Reels, which have higher organic engagement than static posts.
- Competitive Disadvantage: Competitors using video effectively will capture more attention, followers, and sales.
- ☑ Revenue Loss: Businesses could see 10–20% lower conversion rates on social media marketing campaigns due to low-quality or infrequent video content.
- Increased Marketing Costs: Without an affordable in-house solution, businesses may have to pay \$100-300 per Reel to external agencies, making consistent production unsustainable.

### **©** Goals and Success Metrics

#### **Primary Objective**

Enable small businesses to consistently produce high-quality, engaging Reels with minimal time and effort, driving better social media engagement and sales.

#### **Success Metrics**

# **W** LevelOMetrics(PrimaryKPIs)

- Average Reel Creation Time: ~2–3 hours → 1 hour or less (within 3 months)
- Engagement Rate per Reel: Baseline + 0% → +30% increase (within 3 months)

## **W** Level1Metrics(SecondaryKPIs)

- ☑ **Monthly Active Users:**  $0 \rightarrow 500$  (within 6 months).

## **W** Level2Metrics(Engagement/Quality)

- ☑ User Satisfaction (NPS): Baseline TBD  $\rightarrow$  ≥ 70 (within 6 months).

#### Guardrail Metrics

- 2 App Crash Rate: Should remain below 2%.
- Content Quality Complaints: Should remain below 5% of total support tickets
- 2 API Response Time: Should remain under 500ms for 95% of requests

## **TargetAudience**

#### **Primary Users**

Small business owners and solo entrepreneurs.

#### Size:

• Target initial user base: ~500–1000 users within 6 months.

#### Characteristics:

- Limited marketing budget.
- Non-technical.
- Age 25–50, running product or service businesses.
- Active on social media but not professional marketers.

#### **Current Behavior:**

- Create Reels manually using Instagram's native tools.
- Often inconsistent or low-quality content.
- Sometimes outsource to agencies at high cost.

#### **Motivation:**

- Save time and money on content creation.
- · Grow brand visibility on social media.
- Make professional-quality Reels without hiring experts.

#### **Secondary Users**

Freelance social media managers and small marketing agencies.

#### Size:

Potentially ~100–300 users in pilot phase.

#### **Characteristics:**

- Serve multiple small business clients.
- Looking for ways to scale social content creation.
- Semi-technical, familiar with marketing tools.

#### **Relationship to Primary:**

- Create Reels on behalf of small business owners.
- May recommend or introduce the tool to their clients.

#### **User Personas**

Sharad: "Busy Shop Owner"

- Runs a local store or online business.
- Goal: Grow customer base using social media.
- Frustrations: No time, feels uncreative, struggles to produce videos.

Bharat: "Freelance Social Media Manager"

- Manages content for 5–10 small clients.
- Goal: Deliver high-quality Reels faster.
- Frustrations: Expensive outsourcing, time-consuming manual editing.

# Solution Overview

#### **High-Level Approach**

Provide an intuitive, Al-powered platform that guides small business owners through every step of creating effective, engaging Reels—from idea generation to export—without requiring professional marketing or video production expertise.

#### **Key Principles**

**B** Ease of Use: Simple, guided experience for non-technical users.

Affordability: Designed to be accessible for small business budgets.

2 Quality Output: Ensure professional-looking Reels that drive engagement.

2 Customization: Allow users to adapt scripts and visuals to their brand.

Time Efficiency: Dramatically reduce time spent on content creation.

#### **Solution Components**

- 1. Al Script Generator: Turns product keywords into marketing-ready scripts.
- 2. Storyboard Wizard: Helps plan and visualize Reel scenes step by step.
- 3. **Voiceover & Caption Assistant:** Automatically generates voiceovers and captions to improve accessibility and engagement.
- 4. Export Tool: Easy, one-click export to Instagram-compatible formats.

## Detailed Requirements

#### Feature 1: AI Script Generator

#### **Objective:**

Enable users to quickly generate professional, marketing-friendly Reel scripts tailored to their products or services.

#### **UserStory:**

"As a small business owner, I want to auto-generate effective marketing scripts from my keywords so that I can easily create engaging Reels without hiring a copywriter."

#### **FunctionalRequirements**:

- Accept product/service keywords as input.
- Use AI model to generate a complete, customizable script.
- Provide multiple script variations for user selection.

#### AcceptanceCriteria:

- **Given** the user is on the Script Generator screen, **When** they enter keywords and click "Generate," **Then** the system should display at least 3 script options.
- **Given** generated scripts, **When** the user selects one, **Then** it should load into the storyboard editor for further customization.

EffortEstimate: 5 story points (approx. 1 week of development).

#### Feature 2: Storyboard Wizard

#### **Objective:**

Help users visually plan and structure their Reel content, making it easier to shoot and edit consistently engaging videos.

#### **User Story:**

"As a small business owner, I want to break my Reel into scenes with guidance on visuals and messaging so that I can film content more confidently and efficiently."

#### **Functional Requirements:**

- 1. Display the selected script broken into suggested scenes.
- 2. Allow users to edit scene text and notes.
- 3. Provide AI-generated visual suggestions (e.g., prompts for camera angles or props).

#### **Acceptance Criteria:**

- Given a selected script, When the user opens the Storyboard Wizard, Then the system should display it broken into at least 3 suggested scenes.
- Given a scene, When the user clicks "Edit," Then they can customize text and notes.
- Given an AI suggestion request, When the user clicks "Get Suggestions," Then the system provides visual prompt recommendations.

#### **Priority:**

High

#### **Effort Estimate:**

8 story points (approx. 2 weeks of development)



#### **User Journey Map**

#### End-to-end journey description:

The user journey is designed to be simple and supportive, guiding small business owners through every step of creating an effective Reel—from idea to export—without requiring technical or marketing expertise.

#### Step1: Login & Dashboard

- User Action: Logs in and sees dashboard with "Create New Reel" button.
- **System Response:** Loads dashboard with recent projects and prominent call-to-action.
- User Emotion: Feels welcomed and confident about where to start.

#### **Step2:**Enter Keywords

- User Action: Enters product/service keywords.
- **System Response:** Validates input, triggers AI script generation.
- **User Emotion:** Curious, hopeful about automated help.

#### Step 3: Review & Select Script

- User Action: Reviews 3+ Al-generated script options.
- System Response: Displays scripts with edit options.
- User Emotion: Empowered, in control of creative voice.

#### **Step 4: Storyboard Planning**

- User Action: Breaks script into scenes, adds notes.
- System Response: Guides with AI visual suggestions.
- **User Emotion:** Creative, organized, confident about filming plan.

#### **Step 5: Add Voiceover & Captions**

- User Action: Clicks "Generate Voiceover" and "Add Captions."
- System Response: Al produces voice track and synced captions.
- User Emotion: Relieved, sees professional polish without effort.

#### **Step 6: Export Reel**

- User Action: Clicks "Export" in Instagram-friendly format.
- System Response: Processes and provides download link.
- **User Emotion:** Satisfied, proud, ready to share content.

#### **Key Interaction Points**

- Generating scripts instantly from keywords.
- Customizing storyboard scenes with AI suggestions.
- Adding automatic voiceovers and captions.
- One-click export in correct format.

#### **Design Principles**

- 2 Simplicity: Every step clear and intuitive.
- Empowerment: Al assists but doesn't override user control.
- Affordability: Suitable for small business budgets.
- 2 Consistency: Reliable, predictable interactions.
- Delight: Turn a stressful task into an easy, fun experience.

### **Technical Requirements**

#### **Architecture Overview**

A modular web application with React frontend and Python Flask backend. Al services are deployed as containerized microservices. User data and assets are stored securely in the cloud (AWS).

#### **Frontend Requirements**

Framework: React.js with Material UI or Tailwind for styling.

#### **Performance Requirements:**

- Load dashboard < 2 seconds on average connection.</li>
- Render Al-generated content < 3 seconds.</li>

#### Prowser/Device Compatibility:

- Chrome, Firefox, Edge, Safari (latest 2 versions).
- Fully responsive design for mobile and tablet.

#### **Backend Requirements**

#### **2** API Requirements:

- RESTful API endpoints for user authentication, project management, script generation, storyboard management, export services.
- Rate limiting and authentication via JWT.

#### 2 Database Requirements:

- PostgreSQL for user data and project metadata.
- S3 (or equivalent) for storing generated assets (scripts, audio files, exports).

#### **?** Integration Requirements:

- Optional integration with Instagram API for direct publishing (future phase).
- Al text generation model (e.g., OpenAl or local LLM).
- TTS (text-to-speech) service for voiceovers.

#### **Third-Party Dependencies**

- ② OpenAI API (or other LLM for script generation).
- 2 AWS S3 for asset storage.
- Text-to-speech API (e.g., Amazon Polly, Google Cloud TTS).
- 2 Authentication service (e.g., Auth0 or custom JWT).
- 2 Optional: Instagram Graph API for future direct publishing.

### Performance Requirements

#### **?** Response Time:

- Average API response time ≤ 500ms for 95% of requests.
- Frontend page load time ≤ 2 seconds on standard broadband.

#### Scalability:

- Support 500 concurrent users at launch.
- Scalable to 5,000+ users with horizontal scaling (containerized backend, load balancer).
- Auto-scaling cloud infrastructure (AWS ECS / Kubernetes).

#### Availability:

- 99.5% uptime SLA during business hours (9am–9pm user timezones).
- Scheduled maintenance windows communicated 48 hours in advance.

### **Security Requirements**

- Secure user authentication (OAuth 2.0 / JWT).
- Encrypted data storage (AES-256 for user data, secure S3 buckets for assets).
- HTTPS enforced for all traffic.
- Rate limiting and abuse detection on public APIs.
- Regular vulnerability scans and patching.
- Compliance with relevant data protection laws (GDPR-like principles).

## Implementation Plan

#### Phase 1: MVP (Minimum Viable Product)

#### • Timeline:

Start Date: August 1, 2025End Date: August 31, 2025

#### • Scope:

- User authentication and dashboard.
- o Al Script Generator with keyword input.
- Basic storyboard editing with manual customization.
- o Reel export in Instagram-friendly format.

#### • Success Criteria:

- User can generate and export at least 1 Reel.
- System stable with <2% crash rate.</li>
- o 90% of early users can complete the Reel creation flow without support.

#### Phase 2: Enhancement Phase

#### • Timeline:

Start Date: September 1, 2025End Date: September 30, 2025

#### Scope:

- o Add Voiceover & Caption Assistant with TTS integration.
- o Al-generated storyboard visual suggestions.
- Improved UI/UX based on early feedback.

#### • Success Criteria:

- o 30% faster average Reel creation time.
- User satisfaction (NPS) ≥ 70.
- o Engagement rate on created Reels improved by 20%+.

#### Phase 3: Future Iterations

#### 2 Timeline:

Start Date: October 2025 onward

#### ② Scope:

- Direct publishing integration with Instagram API.
- Team/agency accounts with multi-user support.
- Advanced analytics dashboard for Reel performance.
- Multilingual script generation.

#### **Key Milestones**

☑ ] **MVP Complete:** August 31, 2025 – Core Reel generation flow live with script generator, basic storyboard, and export.

☑ Voiceover & Caption Assistant Launched: September 15, 2025 – TTS integration and auto-captioning available to users.

☑ Enhanced Storyboard & AI Suggestions Released: September 30, 2025 – Visual suggestions and improved UX delivered.

☑ Beta User Feedback Review: October 15, 2025 – Analyze early usage data and feedback to prioritize next features.

☑ **Instagram Direct Publishing Integration:** November 30, 2025 – Ability to publish Reels directly to Instagram from app.

#### **⚠** Risks and Mitigation

#### **High-Risk Items**

Risk: Low adoption by target users.

- **Impact:** High
- Probability: Medium
- **Mitigation:** Conduct early user testing, refine onboarding UX, offer limited-time free trial to drive initial usage.

Risk: Al-generated scripts are low quality or irrelevant.

- Impact: High
- Probability: Medium
- **Mitigation:** Fine-tune model on marketing-specific data, gather user feedback for iterative improvements.

Risk: Exceeding budget or timeline.

- Impact: Medium
- Probability: Medium
- **Mitigation:** Prioritize MVP scope clearly, use agile sprints with defined deliverables, maintain weekly progress reviews.

#### **Technical Risks**

- **Risk:** All text generation costs scale too quickly with usage.
  - Mitigation: Optimize prompts, cache frequent results, explore local model deployment.
- **Risk:** Integration with TTS or Instagram API fails or changes.
  - Mitigation: Design modular integration layer, monitor API changes, maintain backup vendors.
- Pisk: Data security/privacy vulnerabilities.
  - Mitigation: Enforce HTTPS, encrypt all user data, perform regular security reviews and code audits.

#### **Business Risks**

- Market Risk: Low willingness to pay among small businesses.
  - o **Mitigation:** Offer flexible pricing tiers, free trial, clear ROI messaging.
- Competitive Risk: New or existing tools replicate features quickly.
  - Mitigation: Focus on superior UX, faster iteration, niche-specific fine-tuning, and early user loyalty.
- Strategic Risk: Platform dependence on Instagram's policies.
  - Mitigation: Monitor API and policy changes; plan for multi-platform export options (TikTok, Facebook Reels).

#### **Operational Risks**

- **Risk:** Limited resources delay feature delivery.
  - **Mitigation:** Prioritize MVP scope tightly, use agile sprints with clear milestones, weekly check-ins.

Risk: High support load from non-technical users.

Mitigation: Invest in intuitive UX, robust onboarding, self-help resources (FAQs, tutorials).

2 Risk: Maintenance burden as AI services evolve.

• Mitigation: Modular architecture with versioned APIs; regular dependency reviews and updates.



### Dependencies

#### **Internal Dependencies**

- Frontend Team: Build React components for dashboard, script generator, storyboard wizard needed by Week 2 of MVP.
- Backend Team: Develop Flask API endpoints and integrate AI services needed by Week 2 of MVP.
- **Design Team:** Provide finalized UI mockups and user flows needed before development sprint starts.

#### **External Dependencies**

- **Third Party/Partner:** OpenAI API Needed by Week 1 for AI script generation integration.
- Third Party/Partner: AWS (S3) Needed by Week 1 for secure asset storage.
- Third Party/Partner: TTS Provider (Amazon Polly or Google Cloud TTS) Needed by Week 3 for voiceover generation in Phase 2.
- Third Party/Partner: Instagram Graph API Needed by Phase 3 for direct publishing feature.

#### **Blocking Dependencies**

- UX Design Sign-off: Must be completed before frontend development begins.
- API Access Credentials: Must be secured before backend integration can start.
- Budget Approval: Must be finalized for OpenAI, AWS, and TTS service usage before kickoff.
- Developer Resourcing: Frontend and backend team allocation must be confirmed before sprint planning.

## Analytics and Measurement

#### Measurement Framework

Track user adoption, content creation efficiency, and social media engagement outcomes to measure progress toward key goals. Combine product analytics, user surveys, and performance metrics.

#### **Key Events to Track**

- **Reel Created:** 
  - When: User completes export.
  - o *Measures:* Feature adoption, creation volume per user.

#### Script Generated:

- When: User triggers Al generation.
- o *Measures:* Engagement with AI features, input keywords.

#### Storyboard Customized:

- o When: User edits scenes.
- o Measures: Depth of engagement, UX effectiveness.

#### Voiceover Generated:

- When: User generates TTS audio.
- o Measures: Adoption of premium features.

#### Export Success:

- When: Reel file is successfully downloaded.
- o *Measures:* Funnel completion, error rate.

#### **Dashboards and Reporting**

#### Product Analytics Dashboard:

- Tracks key usage metrics (DAU/MAU, Reels created, time to creation).
- Owned by Product Manager.

#### • Quality & Satisfaction Dashboard:

- o NPS scores, user feedback.
- o Reviewed by Product and Support teams.

#### Performance & Stability Dashboard:

- API response times, crash rates.
- Monitored by Engineering Lead.

### A/B Testing Strategy

- Test alternative script generation models to improve quality and relevance.
- Experiment with different onboarding flows to reduce drop-off.
- Measure impact of premium voiceover/caption features on user conversion.
- Use statistical significance thresholds (e.g., p < 0.05) to validate improvements.

## 

#### **Launch Strategy**

#### Soft Launch:

- Limited beta with 50–100 early adopters (existing customers, partner referrals).
- Collect feedback, identify usability issues.

#### Public Launch:

- o Official website launch with signup and free trial.
- Promotion via social media marketing, small business forums, and email list.
- o Partnership outreach to marketing agencies and freelance managers.

#### **Communication Plan**

Internal:

- o Weekly cross-functional check-ins for Product, Engineering, Design.
- Bi-weekly progress reports shared with leadership.
- Final go/no-go review meeting before launch.

#### External:

- o Pre-launch teaser emails to waitlist.
- Launch announcement on social media and website.
- Press release to small business media outlets.
- Webinars/demo sessions for new users.

#### **Training Requirements**

#### Support Team:

- o Training on app functionality, common issues, and troubleshooting.
- o Access to internal knowledge base and FAQs.

#### Sales & Marketing Teams:

- Product demo scripts and value proposition.
- Objection handling for pricing or feature gaps.

#### Launch Criteria

- All MVP acceptance criteria met and tested.
- Performance benchmarks achieved (API ≤ 500ms, crash rate ≤ 2%).
- Security review completed.
- Analytics tracking implemented and tested.
- Documentation and self-help resources published.
- Rollback plan prepared and reviewed.

## **Success Criteria**

#### **Definition of Success**

- launched on time, enabling users to generate and export Reels with AI assistance.
- Achieves target usage metrics (≥ 500 MAUs within 6 months).
- Reel creation time reduced by 50% compared to manual baseline.
- User NPS ≥ 70, with positive feedback on ease-of-use and script quality.
- Engagement rates on user-created Reels improve by at least 30%.

#### **Launch Readiness Checklist**

- All acceptance criteria met
- Performance benchmarks achieved (API ≤ 500ms, crash rate ≤ 2%)
- Security review completed
- Analytics tracking implemented
- Documentation completed (user guides, internal FAQs)
- Training delivered to support and marketing teams

#### **Post-Launch Review**

- ✓ **Timing:** Conduct review 4 weeks post-launch.
- ✓ Evaluation Process:
  - Analyze usage data (Reels created, MAU, engagement).
  - o Gather user feedback via surveys and support tickets.
  - Review system stability and performance logs.
  - o Prioritize Phase 2/3 features and bug fixes based on insights.
- ✓ **Stakeholders:** Product Manager, Engineering Lead, Design Lead, Business Stakeholders.

### Appendices

#### Appendix A: Competitive Analysis

- InVideo / Pictory: General-purpose video editing with AI assistance, but not focused on short-form Reels or small business marketing scripts.
- Canva Video: Easy editing templates but limited AI script generation.
- Lumen5: Al-assisted video creation, strong for blogs but less optimized for Reels.
- Competitive Gap: Most tools target generic video creators or agencies. Al Reel Coach differentiates by focusing on small business owners needing simple, guided Reel production with marketing-optimized scripts.

#### Appendix B: User Research

- Method: 8 semi-structured interviews with small business owners.
- Findings:
  - 75% struggle with consistent Reel production.
  - Average creation time ~2–3 hours per video.
  - o 60% say they don't feel "creative" or "confident" writing scripts.
  - Preference for affordable, simple tools with clear step-by-step guidance.
- Insight: Validates need for Al-powered coaching that reduces time and creative barriers.

#### Appendix C: Technical Deep Dive

- Architecture: Modular React frontend with Flask/Python backend.
- Services:
  - OpenAl for script generation.
  - TTS provider (e.g., Polly) for voiceovers.
  - AWS S3 for asset storage.
- API Design: RESTful endpoints with JWT authentication.
- Infrastructure: Dockerized microservices, AWS ECS for scaling.
- Data Storage: PostgreSQL for metadata, encrypted S3 for user assets.
- **Monitoring:** CloudWatch / DataDog for performance, Sentry for error tracking.

#### Appendix D: Legal and Compliance

- **Data Privacy:** Enforce HTTPS, encrypt user data at rest and in transit.
- User Data: Store only essential project metadata and assets; delete on user request.
- Third-Party Services: Comply with OpenAI, AWS, TTS provider terms of service.
- Terms of Use / Privacy Policy: Required before launch, covering AI usage disclaimers and data handling practices.
- **Compliance Approach:** GDPR-like principles even if not legally required, to build user trust.

## **✓** Approval

Role	Name	Signature	Date
Product Manager	Shubhangi	Shubhangi mane	05-Jul-2025
	Mane		
Engineering Lead	Raj		05-Jul-2025
Design Lead	Sharad		05-Jul-2025
Data Science Lead	Yogita		05-Jul-2025
Business Stakeholder	Manav		

### **ChangeLog**

Version	Date	Changes	Author
1.0	05-Jul-2025	Initial draft	Product Team
1.1	05-Jul-2025	Added requirements, user journey, technical	Product Team

## TemplateNotes:

- This template is designed to be comprehensive yet flexible.
- Not every section may be **relevant for every project**—adapt as needed.
- **Tailor** content based on your organization's specific goals, resources, and stakeholders.
- Focus on clarity and specificity in all requirements and descriptions.
- Use data and measurable metrics wherever possible to support decisions and track success.