

**Product Requirements Document (PRD)**  
**Product Name: AI-powered PRD Reviewer**  
**Owner:** Andy Brudtkuhl  
**Date:** 1/6/2025

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## 1. Overview

### 1.1 Purpose

This document outlines the requirements for an AI-based PRD Reviewer, a new tool offered by pmprompt.com. The tool allows users to upload or paste a PRD, then analyzes and grades the content. It also provides actionable feedback to improve clarity, completeness, and alignment with best practices in product management.

### 1.2 Background & Rationale

- **PRDs are central to product development:** A well-written PRD aligns teams around goals, requirements, and success metrics. However, writing and reviewing PRDs can be time-consuming and subjective.
  - **AI-driven assistance:** With the increasing availability of AI solutions, there is a growing opportunity to automate and enhance document review processes, particularly for structured documents like PRDs.
  - **Competitive advantage:** Existing tools often focus on grammar and spell-checking rather than product-management best practices. By providing a specialized AI-based PRD Reviewer, pmprompt.com can address a niche in the market and become an essential resource for product teams.
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## 2. Goals & Objectives

1. **Automate PRD Review:** Provide an automated solution that reviews and grades PRDs for completeness, clarity, and alignment with standard product management frameworks.
2. **Actionable Feedback:** Offer users targeted, constructive feedback to improve their PRDs.
3. **Easy Integration:** Allow users to paste their PRD text directly or upload their document (e.g., .docx, .pdf, .txt) for instant analysis.
4. **Scalable & Robust:** Ensure the solution can handle varying document lengths and complexities without significant performance degradation.

5. **Enhance pmprompt.com's Reputation:** Position pmprompt.com as a go-to platform for best-in-class product management tools and resources.
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### 3. Target Audience & User Personas

1. **Product Managers:** Need a quick method to validate and improve their PRDs; want to ensure they adhere to best practices.
  2. **Entrepreneurs & Founders:** May be less experienced in formal PRD writing and seek guidance on structure and completeness.
  3. **Product Management Students/Enthusiasts:** Looking for tutorials and feedback on PRD composition to refine their skills.
  4. **Cross-Functional Teams:** Engineers, Designers, or Marketers who need to verify if a PRD is well-structured and provides enough clarity for their respective roles.
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## 4. Key Features & Functionality

### 4.1 Document Upload & Parsing

- **File Upload:** Support for .docx, .pdf, and .txt formats.
- **Text Paste:** Users can directly paste their PRD content into a text editor.
- **Parsing & Formatting:** AI-powered parsing to handle headings, bullet points, and other structural elements.

### 4.2 AI-Driven Analysis & Grading

- **Fine-Tuned AI Models:** Custom-trained NLP models specifically for PRD evaluation.
- **Structural Analysis:** Check for essential PRD sections (e.g., Goals, Scope, Requirements, Success Metrics).
- **Clarity & Readability:** Use text analysis to flag unclear statements, jargon, or ambiguous requirements.
- **Completeness Score:** Based on the presence of standard PRD components, such as user personas, success metrics, and risk assessments.
- **Customizable Grading Rubric:** Admins or advanced users can tweak weighting for different PRD components.

### 4.3 Feedback & Recommendations

- **Immediate Feedback:** Provide a summarized report showing scores across different categories (e.g., Clarity, Completeness, Coherence).

- **Section-Level Insights:** Offer specific suggestions to improve or enrich each section (e.g., “Add user personas” or “Clarify success metrics”).
- **Best Practices Library:** Allow users to browse relevant examples or best practices for each flagged issue.

#### 4.4 Versioning & Comparison

- **Document History:** Track versions of uploaded documents to show progress over time.
- **Side-by-Side Comparisons:** Compare older versions of the PRD with new ones to see improvements.

#### 4.5 Integration & Collaboration

- **Collaboration:** Option to share annotated PRD feedback with team members.
  - **Third-Party Integrations** (Future scope): Potential APIs or plugins for popular product management and documentation tools (e.g., Confluence, Jira, Notion).
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## 5. Technical Requirements

### 5.1 Architecture

- **Frontend:** A web-based interface (React, Vue, or similar) embedded within pmprompt.com.
- **Backend:** Cloud-based server-side application (Node.js, Python, or similar) with an AI engine for text analysis.
- **AI Engine:**
  - Fine-tuned NLP model (e.g., GPT-based or other leading large language models).
  - Scalable via containerization (Docker, Kubernetes) to handle variable load.

### 5.2 Performance & Scalability

- **Response Time:** Under 10 seconds for documents < 10 pages, scaling gracefully for larger documents.
- **High Availability:** Target 99.9% uptime with robust error handling and fallback mechanisms.

### 5.3 Security & Privacy

- **Data Encryption:** Secure data transfer (HTTPS) and encrypted storage for uploaded documents.

- **User Privacy:** Option to remove user-submitted content after analysis or keep it anonymized for AI model improvements (with explicit user consent).
  - **Compliance:** Adhere to relevant data protection regulations (GDPR, CCPA, etc.).
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## 6. User Flow

1. **Login/Access:** User logs into pmprompt.com or navigates to the AI-based PRD Reviewer tool.
  2. **Upload or Paste Document:** User either uploads a file or pastes the PRD text.
  3. **Review & Analysis:** The AI engine processes the text, identifying and scoring key sections.
  4. **Feedback:** A summary score and section-by-section suggestions are displayed.
  5. **Edit & Iterate:** Users can incorporate feedback, then re-upload or re-paste to see improvement.
  6. **Export/Share:** User may export the feedback report or share a link with collaborators.
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## 7. Success Metrics

1. **User Adoption & Engagement**
    - Number of unique users running PRD analysis weekly/monthly.
    - Average session length during analysis.
  2. **Feedback Quality**
    - User-reported satisfaction via ratings or surveys.
    - Percentage of feedback suggestions incorporated by users.
  3. **Retention & Conversion**
    - Conversion rate of free users to premium plans if any advanced features are subscription-based.
    - Frequency of returning users who analyze multiple PRDs.
  4. **Time Savings**
    - Reduction in time spent by product managers on manual reviews (anecdotal or survey-based metric).
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## 8. Constraints & Assumptions

- **AI Limitations:** The AI may occasionally produce inaccurate or incomplete feedback due to training data constraints. A human review is still recommended for critical documents.

- **Minimum Document Requirements:** Documents require some level of structure (headers, bullet points) for optimal analysis.
  - **Initial Language Support:** English as the primary language. Additional language support may be added in future iterations.
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## 9. Risks & Mitigations

Risk	Mitigation
<b>AI Model Inaccuracies</b>	Regular model retraining and user feedback loops.
<b>User Privacy Concerns</b>	Encrypt all data, give options to delete submissions.
<b>Performance Bottlenecks</b>	Implement load balancing and container orchestration.
<b>Over-reliance on AI</b>	Encourage users to consider the AI as a supplement, not a replacement for expert review.
<b>Complex Document Structures</b>	Implement robust parsing logic to handle various formats.

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## 10. Timeline & Roadmap

- 1. MVP (Month 1–2)**
  - Basic upload/paste functionality.
  - Core AI-based grading (focus on structure, completeness).
  - Feedback summary and key recommendation points.
- 2. Enhanced Beta (Month 3–4)**
  - Section-by-section detailed feedback.
  - Support for multiple file formats.
  - User permissions, collaboration tools (shareable links).
- 3. Full Release (Month 5–6)**
  - Versioning & comparison feature.
  - Advanced analytics and deeper insight on user personas, success metrics, etc.
  - Enhanced security & privacy features (GDPR/CCPA compliance).
- 4. Future Improvements**

- Integration with Confluence/Jira/Notion (API-based).
  - Multi-language support.
  - Expansion of best practice templates and resources library.
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## 11. Stakeholders & Approvals

- **Product Manager:** Oversees the vision, roadmap, and success metrics.
  - **Engineering Lead:** Responsible for technical feasibility, architecture, and code quality.
  - **Data Science/AI Lead:** Oversees model training, evaluation, and updates.
  - **Design Lead:** Responsible for UX/UI, user flow, and overall brand consistency.
  - **Marketing & Growth:** Plans go-to-market strategies and user acquisition campaigns.
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## 12. Acceptance Criteria

### 1. Functional

- Users can successfully upload/paste PRDs and receive an AI-generated grade and feedback.
- System provides at least three actionable suggestions per PRD upload.

### 2. Usability

- The reviewer tool is intuitive, with minimal friction in the upload and review process.
- Feedback format is clear and easy to understand, prompting users to make improvements.

### 3. Performance

- Response time under 10 seconds for documents under 10 pages.
- System handles 100 concurrent users without degradation.

### 4. Security

- All data transmission is over HTTPS.
  - User content can be fully deleted upon request.
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## 13. Open Questions

1. **Pricing Model:** Will the AI-based PRD Reviewer remain free or require a subscription tier for advanced features?
  2. **Additional File Format Support:** Do we need to support Google Docs import directly via API?
  3. **Industry-Specific Customizations:** Do we plan to adapt the AI model for different industries (e.g., healthcare, fintech)?
  4. **Localization:** Which languages should we prioritize next after English?
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## Conclusion

The AI-based PRD Reviewer at pmprompt.com aims to empower product teams by automating much of the PRD review process. With a focus on structure, clarity, and completeness, it will help users create higher-quality PRDs faster. By providing actionable feedback and continuous iteration, pmprompt.com can solidify its position as a leading resource for product managers, entrepreneurs, and teams looking to streamline and elevate their product documentation practices.