Critique System - Usage Guide & Examples

Overview

The Critique System allows you to analyze documents using multiple AI models independently, then compare their critiques to identify consensus and unique insights. This is particularly valuable for research, bias detection, and comprehensive document analysis.

Quick Start

Basic Workflow

1. **Open Critique Modal**
   - Click the "Critique" button in the sidebar
   - The critique modal will open
2. **Choose a Template (Optional but Recommended)**
   - Click one of the 6 quick template buttons
   - The topic field will auto-fill with a research-grade prompt
   - You can edit the prompt or use it as-is
3. **Upload Document (Optional)**
   - Click the paperclip icon (📎) at the bottom-right of the topic field
   - Select a PDF, DOCX, or TXT file
   - Document preview will appear showing filename and size
4. **Select Models**
   - Choose at least 2 models (3+ recommended for better consensus)
   - Top models are pre-selected by default
5. **Start Critique**
   - Click "Start Critique" button
   - Each model will analyze the document independently
   - Wait for all models to complete
6. **Review Results**
   - Individual critiques appear for each model
   - Scroll to bottom for "Consensus Analysis"
   - Check common points (high confidence)
   - Review unique insights (requires judgment)

Available Templates

🎯 Bias Detection

Best for: Research papers, news articles, opinion pieces

What it analyzes:

- Unstated assumptions
- Missing perspectives
- Loaded language
- Methodological biases
- Cultural or political framing
- Confirmation bias

Example output:

- "The document assumes Western cultural norms without acknowledgment"
- "Missing perspectives from affected communities"
- "Loaded language: 'obviously', 'clearly', 'undeniably'"

🔬 Methodology

Best for: Research papers, scientific studies, technical reports

What it analyzes:

- Study design appropriateness
- Sample selection and size
- Data collection methods
- Control variables
- Potential confounds
- Validity (internal and external)
- Reliability and reproducibility

Example output:

- "Sample size (n=30) may be insufficient for statistical power"
- "Lack of control group limits causal inference"
- "Self-reported data introduces potential bias"

💭 Arguments

Best for: Essays, opinion pieces, policy documents, debates

What it analyzes:

- Thesis clarity
- Premise validity
- Reasoning soundness
- Evidence quality and relevance
- Counter-arguments consideration

- Logical fallacies
- Conclusion support

Example output:

- "Circular reasoning detected in paragraph 3"
- "Conclusion overstates what the evidence supports"
- "Counter-arguments not adequately addressed"

📊 Statistics

Best for: Research papers, data reports, scientific studies

What it analyzes:

- Statistical methods appropriateness
- Sample size adequacy
- Significance testing
- Effect sizes
- Confidence intervals
- P-value interpretation
- Multiple comparison corrections
- Data visualization quality

Example output:

- "P-value of 0.048 is marginally significant; replication needed"
- "Effect size (Cohen's d = 0.2) indicates small practical significance"
- "Multiple comparisons not corrected; risk of Type I error"

✍️ Writing Quality

Best for: Academic papers, technical documentation, reports

What it analyzes:

- Organization and structure
- Clarity and conciseness
- Technical accuracy
- Grammar and style
- Citation quality and completeness
- Adherence to conventions
- Audience appropriateness
- Overall readability

Example output:

- "Abstract exceeds typical 250-word limit"
- "Inconsistent citation format (mix of APA and MLA)"

- "Jargon not defined for general audience"

🎓 Comprehensive

Best for: When you need thorough analysis across all dimensions

What it analyzes:

- Methodology and research design
- Argument quality and logical structure
- Evidence and citations
- Potential biases and assumptions
- Writing quality and clarity
- Limitations and gaps
- Strengths and contributions

Example output: (Covers all aspects above in one comprehensive critique)

Understanding Consensus Analysis

After all models complete their critiques, the system automatically generates a **Consensus Analysis** section.

✅ Common Points (High Confidence)

What it means:

- These points were mentioned by multiple models
- Higher reliability and confidence
- Likely represents genuine issues or strengths

How to use:

- **Prioritize these points** in your review
- These are the most reliable critiques
- Address these issues first if revising

Example:

```
✅ Common Points (High Confidence)
• Multiple models discussed methodology
• Multiple models discussed sample size
• Multiple models discussed bias
```

Interpretation: If 3 out of 3 models mention sample size concerns, this is very likely a legitimate issue that needs attention.

💡 Unique Insights (Requires Judgment)

What it means:

- These points were mentioned by only one model
- May represent unique perspectives or model-specific biases
- Requires human judgment to evaluate

How to use:

- **Investigate further** - Don't dismiss automatically
- May reveal important insights others missed
- May also reveal model-specific biases
- Use your expertise to evaluate validity

Example:

```
💡 Unique Insights (Requires Judgment)

Model A:
• Potential publication bias in literature review...
• Alternative statistical approach could be...

Model B:
• Cultural context not adequately addressed...
```

Interpretation: Model A noticed a statistical concern that others missed - worth investigating. Model B raised a cultural point - evaluate if relevant to your context.

Detailed Usage Examples

Example 1: Research Paper Bias Detection

Scenario: You're reviewing a research paper on social media effects and want to identify potential biases.

Steps:

1. Click Critique button
2. Click "🎯 Bias Detection" template
3. Upload the research paper PDF (e.g., "social_media_study.pdf")
4. Select 3 models: GPT-4, Claude-3, Llama-3
5. Click "Start Critique"

What happens:

- Each model independently analyzes the paper for biases
- Processing time: ~5-10 seconds (document fits in context)
- Strategy used: 🎯 Full Context (most accurate)

Results:

```
Model A (GPT-4):
"The study exhibits selection bias in participant recruitment,
focusing primarily on college students from Western universities.
This limits generalizability to other age groups and cultures..."

Model B (Claude-3):
"Confirmation bias is evident in the literature review, which
predominantly cites studies supporting negative effects while
underrepresenting research showing neutral or positive outcomes..."

Model C (Llama-3):
"The framing of questions in the survey uses loaded language
('addictive behavior', 'time wasted') which may prime negative
responses from participants..."

Consensus Analysis:
✅ Common Points:
• Multiple models discussed bias
• Multiple models discussed sample size
• Multiple models discussed methodology

💡 Unique Insights:
Model B: "Publication bias in literature review selection..."
Model C: "Survey question framing may prime responses..."
```

How to use results:

- **High confidence:** All models agree on sample bias → definitely address this
- **Investigate:** Model B's publication bias point → check literature review
- **Consider:** Model C's question framing → review survey design

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Example 2: Dissertation Methodology Review

Scenario: You're reviewing your dissertation methodology chapter before submission.

Steps:

1. Click Critique button
2. Click "🔬 Methodology" template
3. Upload methodology chapter (e.g., "chapter3_methodology.docx")
4. Select 3 models
5. Click "Start Critique"

What happens:

- Each model analyzes your methodology independently
- Processing time: ~4-8 seconds
- Strategy used: 🔍 Smart Search (finds relevant sections)

Results:

```
Model A:
"Strengths: Clear research design with appropriate mixed-methods
approach. Weaknesses: Sample size (n=45) may be insufficient for
quantitative analysis given the number of variables..."

Model B:
"The qualitative sampling strategy is well-justified. However,
the lack of inter-rater reliability measures for coding raises
concerns about consistency..."

Model C:
"Ethical considerations are thoroughly addressed. The triangulation
approach strengthens validity. Consider adding more detail on
participant recruitment procedures..."

Consensus Analysis:
✅ Common Points:
• Multiple models discussed sample size
• Multiple models discussed validity
• Multiple models discussed data

💡 Unique Insights:
Model B: "Inter-rater reliability measures needed for coding..."
Model C: "More detail needed on recruitment procedures..."
```

How to use results:

- **Address immediately:** Sample size concerns (mentioned by multiple models)
- **Add section:** Inter-rater reliability (Model B's unique but valid point)
- **Expand:** Recruitment procedures (Model C's suggestion)

Example 3: Policy Document Argument Analysis

Scenario: You're analyzing a policy proposal for logical soundness.

Steps:

1. Click Critique button
2. Click "💭 Arguments" template
3. Upload policy document PDF
4. Select 3 models
5. Click "Start Critique"

Results:

```
Model A:
"The central argument relies on a slippery slope fallacy, suggesting
```

```
that minor policy changes will inevitably lead to extreme outcomes
without providing evidence for this causal chain..."

Model B:
"Strong use of empirical evidence in sections 2-3. However, the
conclusion overstates what the evidence supports. The data shows
correlation, not causation..."

Model C:
"Counter-arguments are acknowledged but not adequately addressed.
The document dismisses opposing views without engaging with their
substantive points..."

Consensus Analysis:
✅ Common Points:
• Multiple models discussed evidence
• Multiple models discussed reasoning
• Multiple models discussed conclusion

💡 Unique Insights:
Model A: "Slippery slope fallacy in causal chain..."
Model C: "Counter-arguments not adequately addressed..."
```

How to use results:

- **Revise:** Conclusion overstates evidence (consensus issue)
- **Check:** Slippery slope argument (Model A's specific concern)
- **Strengthen:** Counter-argument section (Model C's valid point)

Example 4: Statistical Analysis Review

Scenario: Reviewing statistical methods in a colleague's paper.

Steps:

1. Click Critique button
2. Click "📊 Statistics" template
3. Upload results section
4. Select 3 models
5. Click "Start Critique"

Results:

```
Model A:
"The use of ANOVA is appropriate for the research question. However,
post-hoc tests are not corrected for multiple comparisons (e.g.,
Bonferroni correction), inflating Type I error risk..."

Model B:
"Effect sizes are not reported alongside p-values. While p=0.03
```

```
indicates statistical significance, the practical significance
remains unclear without effect size measures..."

Model C:
"Sample size calculation is not provided. With n=50 per group,
power analysis should be reported to ensure adequate statistical
power for detecting meaningful effects..."

Consensus Analysis:
✅ Common Points:
• Multiple models discussed statistical
• Multiple models discussed significance
• Multiple models discussed data

💡 Unique Insights:
Model A: "Multiple comparison corrections needed..."
Model B: "Effect sizes not reported..."
Model C: "Power analysis should be included..."
```

How to use results:

- **Critical:** Add multiple comparison corrections (Model A)
- **Important:** Report effect sizes (Model B)
- **Recommended:** Include power analysis (Model C)

Example 5: Comprehensive Document Review

Scenario: Final review of a complete research paper before journal submission.

Steps:

1. Click Critique button
2. Click "🎓 Comprehensive" template
3. Upload full paper PDF
4. Select 3 models
5. Click "Start Critique"

Results:

```
Model A - Comprehensive Analysis:
"Methodology: Strong experimental design with appropriate controls.
Sample size adequate for primary analysis.

Arguments: Thesis is clear and well-supported. Logical flow is good.

Biases: Some selection bias in participant recruitment. Consider
discussing generalizability limitations.

Writing: Generally clear. Some sections could be more concise.
Citation format inconsistent (mix of APA styles).
```

```
Strengths: Novel approach, rigorous methods, clear presentation.

Limitations: Limited to one geographic region, short follow-up period."

[Similar comprehensive analyses from Models B and C]

Consensus Analysis:
✅ Common Points:
• Multiple models discussed methodology (strong)
• Multiple models discussed sample size (adequate)
• Multiple models discussed bias (selection bias noted)
• Multiple models discussed citation (formatting issues)
• Multiple models discussed clarity (generally good)

💡 Unique Insights:
Model A: "Consider discussing generalizability limitations..."
Model B: "Follow-up period may be too short for long-term effects..."
Model C: "Abstract could better highlight novel contributions..."
```

How to use results:

- **Strengths:** Methodology and arguments are solid (consensus)
- **Fix before submission:** Citation formatting (consensus issue)
- **Add discussion:** Generalizability limitations (good suggestion)
- **Consider:** Longer follow-up or acknowledge limitation

Tips for Best Results

1. Choose the Right Template

- **Bias Detection:** For research papers, news articles, opinion pieces
- **Methodology:** For scientific studies, experiments, research designs
- **Arguments:** For essays, debates, policy documents
- **Statistics:** For data-heavy papers, quantitative research
- **Writing Quality:** For any document needing editorial review
- **Comprehensive:** When you need thorough analysis across all dimensions

2. Select Multiple Models (3+ Recommended)

- **2 models:** Basic comparison
- **3 models:** Good consensus analysis
- **4+ models:** Excellent triangulation and bias detection

3. Use Consensus Analysis Effectively

- **Prioritize common points** - These are most reliable
- **Investigate unique insights** - May reveal important issues
- **Don't dismiss divergence** - It can reveal model biases or unique perspectives

4. Edit Templates as Needed

- Templates are starting points
- Customize for your specific needs
- Add domain-specific criteria
- Focus on particular aspects

5. Document Size Considerations

- **Small docs (5-20 pages):** Fast, uses full context
- **Medium docs (20-50 pages):** Uses smart search for relevant sections
- **Large docs (50+ pages):** Uses summarization, takes longer

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Understanding Processing Strategies

The system automatically selects the best strategy based on document size and model capacity.

🎯 Full Context

- **When:** Document fits in model's context window
- **Process:** Entire document sent to model
- **Accuracy:** ⭐⭐⭐⭐⭐ (Best - no information loss)
- **Speed:** ⚡⚡⚡ (Fastest)
- **Typical docs:** 5-20 pages

🔍 Smart Search (Hybrid Retrieval)

- **When:** Document is 1-3x context limit
- **Process:** Finds relevant sections using AI
- **Accuracy:** ⭐⭐⭐⭐ (Very good)
- **Speed:** ⚡⚡ (Fast)
- **Typical docs:** 20-50 pages

📝 Summarization

- **When:** Document is >3x context limit
- **Process:** Summarizes pages, then analyzes
- **Accuracy:** ⭐⭐⭐ (Good)
- **Speed:** ⚡ (Slower, but handles large docs)
- **Typical docs:** 50+ pages

Troubleshooting

No Consensus Analysis Appears

- **Cause:** Fewer than 2 models completed successfully
- **Solution:** Ensure at least 2 models complete their critiques

Models Give Very Different Critiques

- **This is normal!** Different models have different perspectives
- **Use consensus analysis** to identify reliable points
- **Investigate divergence** - it may reveal biases or unique insights

Processing Takes Long Time

- **Large documents** use summarization strategy (slower)
- **Multiple models** process sequentially
- **Expected:** 2-5 minutes for 100+ page documents

Template Doesn't Fill Topic Field

- **Refresh page** and try again
- **Check console** for JavaScript errors
- **Manual entry:** Copy template text from this guide

Advanced Usage

Combining Templates

You can combine aspects from multiple templates:

Example custom prompt:

```
Analyze this document focusing on:
1. Methodology (study design, sampling, controls)
2. Statistical analysis (methods, significance, effect sizes)
3. Potential biases (selection, confirmation, publication)

Provide specific examples and actionable recommendations.
```

Domain-Specific Critique

Customize templates for your field:

Medical Research:

```
Critique this clinical trial focusing on:
- Study design (RCT, blinding, randomization)
- Patient selection and inclusion/exclusion criteria
- Outcome measures and clinical significance
- Safety reporting and adverse events
- Ethical considerations and informed consent
```

Software Documentation:

```
Critique this technical documentation for:
- Completeness and accuracy
- Code examples and clarity
- API documentation quality
- Error handling coverage
- Accessibility and readability for target audience
```

Frequently Asked Questions

Q: Can I use Critique without uploading a document?

A: Yes! You can use templates to critique a topic or question without a document. Just enter your topic and select models.

Q: How many models should I select?

A: Minimum 2, recommended 3+. More models give better consensus analysis and bias detection.

Q: Can I edit the template prompts?

A: Absolutely! Templates are starting points. Edit them to match your specific needs.

Q: What file types are supported?

A: PDF, DOCX (Microsoft Word), and TXT files.

Q: How long does processing take?

A:

- Small docs (5-20 pages): 5-15 seconds
- Medium docs (20-50 pages): 10-30 seconds
- Large docs (50+ pages): 1-5 minutes

Q: Is my document stored?

A: Documents are processed in memory and not permanently stored. They're cleared after processing.

Q: Can I save the results?

A: Yes, you can copy the results or use your browser's print/save function.

Best Practices for Research

1. Triangulation Strategy

- Use 3+ models for important documents
- Focus on consensus points (high confidence)

- Investigate unique points (may be valuable)

2. Bias Detection Workflow

- Start with Bias Detection template
- Select diverse models
- Look for patterns in consensus analysis
- Verify unique insights with domain knowledge

3. Iterative Review

- First pass: Comprehensive template
- Second pass: Specific templates for weak areas
- Final pass: Writing Quality template

4. Documentation

- Save consensus analysis
- Note which models agreed/disagreed
- Track unique insights for further investigation

Summary

The Critique System with templates and consensus analysis provides:

✅ **Research-grade prompts** - No more vague questions
✅ **Independent analysis** - Each model analyzes separately
✅ **Automatic consensus** - See where models agree/disagree
✅ **Bias detection** - Identify potential biases through triangulation
✅ **Confidence indicators** - Know which critiques to trust
✅ **Flexible templates** - Customize for your needs

Perfect for:

- Research paper review
- Bias detection
- Methodology assessment
- Argument analysis
- Statistical review
- Writing quality improvement
- Comprehensive document analysis

Need help? Check the examples above or experiment with different templates to find what works best for your use case!