

Problems | Name: _____

9.1 Algorithmic Bias

Reference example

System accuracy: 90% overall
Group A: 98 correct of 100
Group B: 82 correct of 100
Same decision affects both groups

9.1.1 - Explain

Why can one overall error rate conceal an important distribution problem?

9.1.2 - Explain

Name a useful evaluation change before broad deployment of this system.

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9.2 Privacy and Data Collection

Reference example

Goal: count library visits by weekday

Proposed fields: name, exact location history, timestamp

Public output needed: weekday totals

9.2.1 - Explain

What information is sufficient for publishing total visits by weekday?

9.2.2 - Explain

Why should a retention rule be part of design rather than a cleanup task postponed indefinitely?

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9.3 Accessibility and Inclusion

Reference example

Chart distinguishes categories only by red and green
Controls require a mouse
Form errors appear without explanatory text

9.3.1 - Explain

Suggest two improvements to the chart and controls in the example.

9.3.2 - Explain

Why is testing only with the original developers insufficient?

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9.4 Responsibility and Trade-offs

Reference example

Proposal: automate student recommendations
Benefit: quicker suggestions
Risks: mistaken records, unequal outcomes
Needed: explanations, review, and correction

9.4.1 - Explain

What should happen when a student challenges a recommendation based on an incorrect record?

9.4.2 - Explain

Name one trade-off when retaining detailed logs for troubleshooting.
