CHARTA LEARNING · INTERVIEW PREPARATION

Data, Analytics and Technology in Audit

Interview preparation summary · AU track

IN THIS SUMMARY

- Analytics
- Technology and the future

INT.UD.1.a · Analytics

Explain how full-population testing and journal entry analysis work, why auditors use them, and how to turn a long list of flagged entries into a risk-based set to examine.

Data analytics lets an auditor screen every item in a population instead of a sample. The clearest use is journal entry testing. Auditing standards ask for it because management can override controls by posting entries that look normal, and a sample may never land on them. The team obtains the full journal extract, proves it is complete, and applies criteria linked to the fraud and error risks it has identified: postings at weekends or after the period end, round amounts, amounts just under an approval limit, entries by users who rarely post, entries with no description, and unusual account pairings such as a debit to receivables against a credit to revenue. A flag is a reason to look, not a finding, and every flagged entry still needs supporting evidence. Combining criteria helps the team prioritise, because an entry that meets three tests deserves more attention than one that meets one. Two usual mistakes are running the tests on an extract nobody has reconciled, and treating a clean result as proof that nothing is wrong, since it only shows that no entry met the criteria chosen.

WORKED EXAMPLE: BRINDLE FOODS: TURNING 2,443 FLAGGED JOURNALS INTO A PLAN

Brindle Foods is an invented food manufacturer with a 31 March year-end. Its journal extract holds 48,200 journals and its total debits have been agreed to the trial balance. The team runs three tests. Weekend postings flag 1,930 journals, round amounts of 10,000 or more in whole thousands flag 612, and postings by users who made fewer than ten journals in the year flag 85. Overlaps: weekend and round 140, weekend and rare user 22, round and rare user 31, and all three 9. How many distinct journals are flagged, how many meet two or more tests, and how should the team use the result?

Answer: 2,443 distinct journals are flagged (5.1% of 48,200); 175 meet two or more tests, including 9 that meet all three. The team examines all 175 multi-flag journals and a reasoned selection of the 2,268 others.

> **Interview tip:** Say: we proved the extract was complete, ran three risk-based tests, found 2,443 flagged journals, and ranked them so we looked at the 175 that met two or more tests first. A flag is a reason to look, not a finding.

INT.UD.1.b · Analytics

Use ratio and trend analysis, outlier detection and duplicate testing on client data, build a sound expectation, and decide when a difference needs more work.

Analytical procedures compare recorded figures with an expectation the auditor builds independently, then investigate differences larger than a threshold set in advance. Trend and ratio analysis asks whether gross margin, receivable days, payroll per head or interest against debt moved in a way the business explains. A good expectation uses data that is reliable and independent of the figure being tested, such as units despatched times prices, or headcount by month times pay rates; last year's number plus inflation is weak, and management's budget is not independent. The more precise the expectation, the smaller the threshold and the more assurance the procedure gives. Data tools add outlier detection, which finds items far from the normal range for a customer or supplier, and duplicate detection, such as the same supplier, invoice number and amount paid twice. Matching on every field gives few false alarms but misses near duplicates, so teams also test looser matches. The usual mistake is accepting management's explanation for a difference without corroborating it with evidence.

WORKED EXAMPLE: PELLAM LEISURE: IS MEMBERSHIP REVENUE PLAUSIBLE?

Pellam Leisure is an invented gym operator. Recorded membership revenue for the year is 4.31m. Operations records show these paying members at each month end: 8,200, 8,350, 8,500, 8,650, 8,800, 8,900, 9,100, 9,300, 9,350, 9,400, 9,450, 9,500. The standard fee is 38 per member per month, and promotions and discounts typically reduce income by about 6% (a rate from last year's analysis of discount reports). The team will investigate any difference above 0.15m, well below performance materiality of 0.40m. What does the expectation show?

Answer: The expectation is 3.84m against 4.31m recorded, a difference of 0.47m (12.2%), which is above the 0.15m threshold, so it needs corroborated explanations.

> **Interview tip:** Say: I built an expectation from member counts and the fee, allowed for discounts, compared it with the ledger, and because the gap was well over our threshold I would break it down by month and look for annual fees recognised too early, rather than accept an explanation.

INT.UD.1.c · Analytics

Assess whether client data is complete, accurate and reliable enough to use, and explain what data analytics can and cannot prove.

Analytics are only as good as the data behind them. Data from the client's system is information produced by the entity, so the auditor must show it is complete and accurate before relying on it. Completeness means reconciling the extract to a control total such as the trial balance, a subledger to its control account, or a record count to the system, and understanding any difference. Accuracy means checking the fields used, for example re-adding a report, tracing a sample of items to source documents, and testing the report logic and parameters, such as the date run and the filters applied. Controls over the system and over changes to the report matter too. Even clean data has limits. A full-population test checks the data against the criteria set, so it cannot show that an invoice reflects a real sale, that a balance is correctly valued, or that missing items do not exist. A zero-exception result is not proof of absence. The usual mistake is to run sophisticated tests on an extract that was never reconciled.

WORKED EXAMPLE: TARN ELECTRICAL: CAN THE AGEING REPORT BE TRUSTED?

Tarn Electrical is an invented electrical wholesaler. The team will use the sales system's ageing report to test expected credit losses. The report shows balances of 1,840,200 current, 612,400 at 30 days, 233,900 at 60 days and 118,300 over 90 days. The receivables control account in the ledger is 2,861,300. Performance materiality is 90,000. Is the report good enough to rely on?

Answer: The report is arithmetically correct at 2,804,800 but is 56,500 (2.0%) below the ledger, so its completeness is unproven until the cause is found and the report logic has been tested.

> **Interview tip:** Say: before I use any client report I agree its total to the ledger and ask how it was produced. A small unexplained difference is still a reason to stop and find out why.

INT.UD.2.a · Technology and the future

Describe the spreadsheet and automation skills expected of an audit trainee, and check a spreadsheet for formula and range errors before relying on it.

A trainee spends much of the engagement in spreadsheets, so interviewers expect confidence with the basics. Useful skills are lookup functions such as XLOOKUP or INDEX-MATCH for matching a sample to a ledger, SUMIF and COUNTIF for totals by category, pivot tables for summarising an extract, sorting and filtering, removing duplicates, and simple date and text functions. Good habits matter as much as features. Keep source data untouched on its own sheet, use formulas rather than typed totals, label every column and tick-mark, and add a check that a total agrees to the ledger. The usual errors are a SUM range that stops short of new rows, a typed number overwriting a formula, inconsistent formulas across a column, and a unit mismatch such as thousands against pounds. When the client gives the auditor a spreadsheet, such as an estimate, it is information produced by the entity and must be tested: inputs agreed to source, formulas reviewed, and key calculations re-performed. Automation tools that repeat routine steps save time but need the same checking.

WORKED EXAMPLE: MARLOW PRINT WORKS: CHECKING A DEPRECIATION SPREADSHEET

Marlow Print Works is an invented printer. Its fixed asset spreadsheet shows eight assets with straight-line depreciation (cost divided by life in years), no residual value: asset A cost 480,000 life 8 years; asset B cost 360,000 life 6 years; asset C cost 210,000 life 5 years; asset D cost 150,000 life 10 years; asset E cost 96,000 life 4 years; asset F cost 72,000 life 3 years; asset G cost 54,000 life 6 years; asset H cost 288,000 life 12 years. The sheet shows a total charge of 228,000. Performance materiality is 25,000. The trainee is asked to check it.

Answer: The correct charge is 258,000; the sheet understated it by 30,000 because a range omitted asset H (24,000) and a typed value replaced a formula for asset C (6,000).

> **Interview tip:** Say: I would recalculate independently rather than trust the total, look at the formulas for ranges that stop short and typed numbers, and add a check to the ledger so the error cannot hide again.

INT.UD.2.b · Technology and the future

Explain how AI tools can help an audit team, the risks of using them (confidentiality, errors, bias, explainability, over-reliance), and how to test a tool before relying on its output.

Firms are adopting AI tools to read contracts, summarise documents, draft working papers and flag unusual transactions, so an interviewer may ask what you think of them. A balanced answer sees the benefit, which is speed and coverage, and names the risks. Confidentiality comes first: client data must not go into a public tool, because it may be stored or reused, and firms usually provide approved systems. Generative tools can state plausible but false content, called hallucination, and their reasoning is often impossible to inspect, which is the explainability problem. Models can inherit bias or miss patterns that were rare in their training data. Responsibility never moves: the engagement team and partner remain accountable for conclusions, so output is a lead to be checked against evidence, not evidence itself. Before relying on a tool, the team tests it: re-performs its output on a sample from across the population, measures how often it is wrong and in what way, and considers whether errors are systematic. Running the tool twice and getting the same answer shows consistency, not accuracy.

WORKED EXAMPLE: DUNMORE ESTATES: HOW FAR CAN THE TEAM RELY ON AN AI LEASE EXTRACTION TOOL?

Dunmore Estates is an invented property company. An AI tool extracted rent, term and review clauses from 250 leases for the lease liability calculation. The team re-performed the extraction for 50 leases picked across all lease types and found 4 with errors, each changing the liability by about 18,000 on average. Three of the four involved rent review clauses. Performance materiality is 300,000. Can the team rely on the tool?

Answer: The tool's 8% error rate projects to about 360,000, which is above performance materiality of 300,000, so the team cannot rely on it for rent review clauses without manual re-performance.

> **Interview tip:** Say: an AI tool is a source of leads, not evidence. I would test it on a sample, project the errors against materiality, look for where it fails, and keep the responsibility for the conclusion with the team.

INT.UD.2.c · Technology and the future

Explain why cyber and IT risk matter to an audit, and how assurance on sustainability and other non-financial reporting differs from a financial statement audit.

Cyber risk is an audit topic because the financial statements rest on systems. An attack can corrupt or destroy records, interrupt trading, create costs, fines and claims, weaken controls and, in extreme cases, threaten going concern. The auditor does not prevent attacks, but considers how the client's IT risks affect the risk of material misstatement: access management, change control and backups, whether records are complete after a restoration, what an intruder could have altered, and whether losses and disclosures are properly reflected. Sustainability reporting is a growing assurance area. Metrics such as emissions, energy use, safety rates or workforce data come from different systems and often rely on estimates and conversion factors. The practitioner checks the reporting criteria are suitable, tests the data and calculations, and gives either limited assurance, with fewer procedures and a negative conclusion, or reasonable assurance, with more work and a positive opinion. Requirements vary by jurisdiction. A common mistake is to assume non-financial data is more reliable because it is not in the ledger.

WORKED EXAMPLE: SALLOW BAY FERRIES: RECALCULATING A REPORTED EMISSIONS FIGURE

Sallow Bay Ferries is an invented operator. Its sustainability report states direct fuel emissions of 8,308 tonnes of CO2e. The company's method says emissions equal litres of fuel used times 2.68 kg per litre, divided by 1,000. The ledger shows fuel purchases of 3,100,000 litres. Tank records show 410,000 litres in stock at the start of the year and 150,000 at the end. The practitioner plans to accept differences of up to 5% in a limited assurance engagement. Is the reported figure acceptable?

Answer: Using fuel consumed gives 9,004.8 tonnes against 8,308 reported, an understatement of 696.8 tonnes (7.7%), above the 5% tolerance, so the figure is not acceptable as reported.

Interview tip: Say: non-financial data still needs recalculation and a check of its source. Here the company used purchases instead of consumption, so I would raise the difference, test the stock records, and keep the tolerance I set at planning in mind.

Summary of the Charta interview-preparation topic. Companies and figures in the examples are invented. Draft content, not yet expert reviewed.