Wells Fargo Interview Experiences

# **Slot: 1**

# **Procedure**

1. Test: Yes. (Hybrid Mode, EE Department)
2. Interview Mode: Physical (CV Raman Building)

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# Subhasis Biswas

**Personal View**: Involves much more theoretical depth than generic AI/ML roles. Leans heavily towards traditional statistical ways of financial modeling.

**Status**: Shortlisted through in-person online test (also called hybrid mode). The test venue was EE Department. I was selected for this role. Accepted and froze.

**Interview Description**

## **Round 1:**

Educational Background of the Interviewer (only one member): Physics

Project Specific Discussions: Almost none.

• Check number palindrome using and without using strings

• Lilypads grow at an exponential rate over a pond. If it gets filled in days X, what is the number of days till it gets filled given the current coverage is Y

• Familiarity with Fourier Transforms

• How to use Fourier Transforms for solving PDEs

• Heat-Kernel usage for solving heat equation

• Finite difference methods for ODEs

• If take money and game stops. If take money and the game continues. Expected reward?

• A matrix A given. Perform f(A) without using repeated direct matrix multiplication, rather simpler arithmetic operations. [Idea/Clarification: If A is diagonalizable, . If for some ring R, then . In simpler words, if is a polynomial the equality holds.]

• What is the density function of , where

• Sketch the graph of , with and being of opposite signs. What happens when we add a linear term?

Side discussion: Basic familiarity with random processes. Drift+Diffusion in Geometric Brownian Motion.

Got almost everything right. Whenever I could not be exactly right, I explained intuitively.

## **Round 2:**

Different interviewers (two members), with a long history in this domain. Educational background was MBA (most likely).

• High-level explanation of Internship and MTech projects

• CV looked GenAI inclined. Why more traditional ways? [Reason: My personal background]

• Explain MTech topic a bit more. [Noise is not exactly white, oftentimes an autocorrelated process. Described ways to simulate noise added measurements of a (deterministic) dynamical system with given initial conditions. Also details on AER coordinate system used for satellite-pass observations.]

• How to solve when is large.

• Explain assumptions for logistic regression. Tell MLE setup.

• Cross entropy loss for perfect classifier

• If all features are zero, find out bias if label is 1, in relation to Logistic Function. [Note: Function, not Regression.]

• Expectation of conditioned on a filtration of [Couldn’t solve exactly. But stated the relation to martingales]

• Interviewers affirmed relevance of the tools used in my CV within the domain.

• I asked about good books to get started with. [Recommended Author: Steven E. Shreve]

Personally speaking, I fell short of my own expectations and underperformed. I did not know almost anything at all about financial theory, so couldn’t exactly get familiar with their line of work. But intuitively I understood their role and my expected responsibilities.

## **Round 3: HR**

• Why two Masters’ degrees? Job opportunity in prior degree.

• Why did I not get PPO from Fidelity internship?

• Why not academia/UPSC?

• Preparation mindset/strategy for competitive exam?

• Inquired if I knew the salary structure. Restated the salary structure once again. [I responded that I was aware from the job description on OCCAP portal.]

• Stated that I had to wait till 4-4:30PM for the results.

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# Tejas Tonde

**Personal View**: Focus more basics of ML

**Interview Description**

## **Round 1:**

Only one member in the panel

Project Specific Discussions: Almost none.

* Take me through your resume.
* Explain logistic regression and linear regression. The assumptions used in these algorithms.
* What is an influential point and an outlier? Effect of outliers in logistic regression? How to overcome the effect of outliers in logistic regression?
* Can we use linear regression in place of logistic regression?
* Given a 4 minutes sand clock and a 7 minutes sand clock, measure 9 minutes.
* Bias -Variance trade off. Over-fitting and under-fitting.
* L1, L2 regularization. What are other regularization techniques?
* Difference between a list and an array in python.
* What are parametric and non-parametric algorithms?
* How to use KNN in linear regression?
* Explain R-square.
* How to measure if binary classification model is performing well?
* Explain recall, precision, F1 score. What are their formulae.
* If a model accuracy is 95%, can we say that the model is performing well?
* How to handle class imbalance? What metric will you focus on in case of cancer prediction (0 or 1)? Explain AUC,ROC.
* Is having more AUC good or bad?
* Explain skewness.
* In a tabular data, if 2 features are highly correlated, what should be done?
* Explain multi-collinearity.
* What are your weaknesses and hobbies? Where do you see yourself after 2 years?