

EY Techathon 6.0 Executive Summary

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AGENTIC AI- POWERED LOAN



Tell us about yourself.

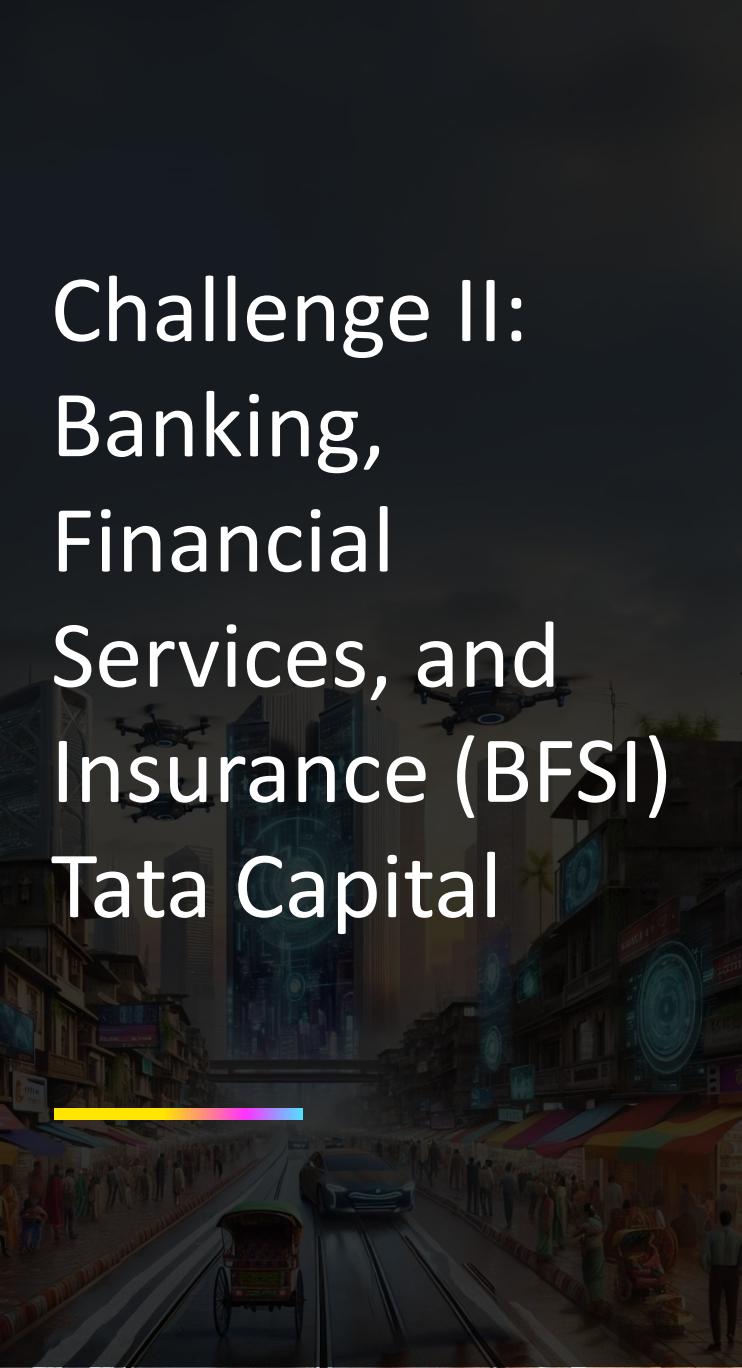
Highlight a technical skill or skills each member brings to the team

01#

ANMOL KUMAR

I'm Anmol Kumar, and my strengths are my logic building and analytical thinking. I have been involved in making real life problem solving projects like occasion message generator and Time planner. I have been doing programming in Java as well as frontend development with AI integration.

Challenge II: Banking, Financial Services, and Insurance (BFSI) Tata Capital



- If we see personal loan processing in NBFCs is often slow, manual and not that much connected to customers which results in face delays in verification, eligibility checks and sanction letter generation. The project I choose is "**Agentic AI – Powered Loan Assistant**" and my motivation to select this problem statement is that we need to make the process easier by using intelligent agents that chat with customers, verify details, check credit scores, and generate instant sanction letters. As a result, we can reduce turnaround time, improve customer experience, and enhance operational efficiency through smart automation.

Describe your approach to solving the problem

(Describing Output Form Factor [Mobile App/Web App/Faceless Agent Execution/Chat Bot/Voice Bot Etc], Key User Group, User Journey.

- Our output will look like Web-Based chatbot application with a conversational interface.
 - The key users for this project will be NBFC customers who are applying for personal loans and loan officers monitoring approvals.
 - The technology we used are Master Agent orchestrating Worker Agents which is used for sales, Verification, Underwriting, and Sanction Letter generation.
 - User journey includes the following steps:
 - 1. Customer will interact with chatbot and enter loan details.
 - 2. After that the system verifies KYC and credit score by using mock APIs.
 - 3. Then, we will do underwriting logic checks eligibility.
 - 4. If it is approved then sanction agent generates a PDF sanction letter instantly.
- After all these we can expect faster loan approval, better customer engagement, and reduced manual effort.

Planned solution design

(Diagram and Key Technology components planned for use)

- We have planned a solution which is built around an Agentic AI architecture with one Master Agent and four Worker Agents, and they all do sales, verification, underwriting and sanction. The Master Agent acts as the central orchestrator, managing the user conversation and coordinating tasks among the worker agents. The frontend is a simple web-based chatbot interface built with React.js, while the backend is developed using Spring Boot (Java) for seamless communication with API. Mock data sources such as CRM, credit bureau, and offer APIs simulate real systems. The sanction agent uses a pdf generation module to create immediate sanction letters, and the overall design ensures scalability, modularity, and real – time interaction between agents.

Potential Benefit from your proposed solution

(Describe in detail the kind of benefit can be planned through your solution, Explain key Matrix, Potential Return on Investment)

- Agentic AI Loan Assistant gives many benefits such as automating and accelerating the loan approval process. It reduces manual effort and decision time which enables instant eligibility checks and real – time sanction letter generation, which can increase loan conversion rates by up to 30%. For NBFCs, this system enhances operational efficiency, minimizes human error, and improves customer satisfaction through a faster and more personalized experience. Some more advantages are it reduces processing time per loan (from hours to minutes), higher customer retention, and lower operational costs due to automation. The overall ROI comes from improved productivity, faster disbursals, and the ability to handle a larger customer base with minimal intervention.

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