

EMA APM Program

Skill Alignment and Onboarding Specialist Persona (SOAS)

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What's stopping TCS from filling 80,000 open positions?

Based on the recent article about huge number of vacant positions in TCS due to skill gap , I came up with an idea to leverage EMA SOAS to enhance talent management and onboarding at TCS . EMA can be used to streamline onboarding process for freshers efficiently.

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Ema APM Program - Case Prompt

Ema is a universal AI employee, with multiple personas across roles and industries to revolutionize how people work. As a PM at Ema, you will regularly encounter deep, impactful enterprise problems where one of Ema's personas can work collaboratively with existing employees to multiply their productivity. Identify one such gap in existing businesses and propose an Ema persona to provide outsized gains to the team she would be a part of. Address the following prompts:

- Why did you choose this problem? What is the potential impact of solving it?
- How will your persona use GenAI to solve the problem? What does the end to end user journey of working with this persona look like?
- How will you test your persona and validate your hypotheses quickly?
Demonstrate the feasibility of your use case via sample prompts and responses on synthetic data.
- How do you measure the success of your solution?
- What are some potential pitfalls of your solution?

Why did I Choose this Problem ?

Context:

The problem faced by TCS, as highlighted in the Economic Times article, TCS faces a significant skills gap, with 80,000 unfilled positions due to mismatched employee skills and project needs, leading to reliance on costly contractors. Onboarding delays for over 10,000 freshers further exacerbate the issue. These problems result in increased operational costs, reduced productivity, low employee morale, and decreased client satisfaction, putting TCS at a competitive disadvantage. Addressing these issues is crucial for optimizing workforce utilization, reducing costs, and improving overall business performance.

Alignment with Ema's Capabilities:

Given Ema's strengths as a Universal AI employee, equipped with a Generative Workflow Engine™ and EmaFusion™ model, addressing the talent management and onboarding issues at TCS aligns perfectly with Ema's core competencies. Ema can be used to automate skill gap identification and upskilling plans. Integrate seamlessly with existing systems. Ensure precise upskilling recommendations and onboarding. Ema is 40-60x cheaper, making it viable for large-scale implementation. Quick deployment (2 days to get started). Robust security measures protect employee data. Observable and explainable AI outcomes reduce risks. High ROI through improved efficiency and reduced operational costs. Resolves 80% of CX issues autonomously, enhancing productivity.

By choosing this problem, we leverage Ema's strengths to address a critical issue faced by TCS, ensuring substantial improvements in productivity, cost efficiency, and overall business performance.

The Impact

Solving the skills gap and onboarding delays at TCS will significantly enhance operational efficiency by reducing the time to fill positions and streamlining internal processes. This will result in substantial cost savings by lowering reliance on expensive contractors and optimizing training investments. Increased productivity will be achieved through faster project initiation and better resource utilization. Employee satisfaction and retention will improve due to clear development paths and efficient onboarding, leading to lower turnover rates. Enhanced client satisfaction from timely, high-quality project delivery will strengthen client relationships. Ultimately, these improvements will give TCS a competitive advantage, allowing it to respond swiftly to market changes and maintain its reputation for excellence.

In short the impact can be seen in

Operational Efficiency , Cost Savings , Increased Productivity , Employee Satisfaction and Retention , Client Satisfaction and Competitive Advantage

How EMA SOAS uses GenAI to solve the problem



Ema SAOS (Skills Alignment and Onboarding Specialist) utilizes Generative AI to automate and optimize complex workflows related to skill assessment, training, and onboarding. Here's how Ema SAOS leverages GenAI capabilities .

EMA SOAS uses natural language processing (NLP) to analyze employee profiles, resumes, project requirements, and job descriptions. It identifies skill gaps by comparing current employee skills against required skills for open positions.

Generates tailored training and development plans based on individual skill gaps. Recommends courses, certifications, and learning resources from various platforms.

Creates and assigns training modules to new hires before their official start date. Monitors the progress and readiness of freshers to ensure they are job-ready.

Uses predictive analytics to match employees and contractors to projects based on their skills and ongoing training. Adjusts resource allocation dynamically as employees complete training.

Continuously tracks training progress and provides feedback to employees. Adjusts training plans based on employee progress and evolving project requirements.

End-to-End User Journey with Ema SAOS



INITIAL ENGAGEMENT:

HR and RMG Onboarding: HR and the Resource Management Group (RMG) set up Ema SAOS, integrating it with existing HR systems and databases.

STEP SKILL GAP ANALYSIS:

HR provides employee profiles, project requirements, and job descriptions. Ema SAOS uses NLP to analyze the data and identify skill gaps. A detailed report on skill gaps and training needs is generated.

PERSONALIZED UPSKILLING:

Ema SAOS creates personalized upskilling plans for employees. Employees receive recommended courses and resources. Ema tracks employee progress and provides regular updates.

ONBOARDING FRESHERS:

Ema assigns pre-joining training modules to new hires. Freshers' progress is tracked to ensure they are job-ready by their start date.

RESOURCE ALLOCATION:

Ema matches employees and contractors to projects based on skills and training progress. Resource allocations are adjusted in real-time as training is completed.

CONTINUOUS IMPROVEMENT:

Ema collects feedback from employees and managers to refine training programs. Training plans are adapted based on feedback and new project requirements.

Testing Ema SAOS and Validating Hypotheses

To quickly test Ema SAOS and validate its hypotheses, we will start with a pilot program focusing on a small, manageable group within TCS. Here's the step-by-step approach:

1. **Select a Pilot Group:** Identify a department or project team with a known skills gap and onboarding delays.
2. **Data Collection:** Gather relevant data on employee profiles, job descriptions, current skillsets, and project requirements.
3. **Baseline Metrics:** Establish baseline metrics for time-to-fill positions, training effectiveness, onboarding duration, employee satisfaction, and project delivery timelines.
4. **Deploy Ema SAOS:** Integrate Ema SAOS with the department's HR systems and start the GenAI-driven processes for skill gap analysis, personalized upskilling, and onboarding management.
5. **Monitor and Measure:** Track the performance of Ema SAOS against the baseline metrics, focusing on the speed and accuracy of skill gap identification, training completion rates, onboarding times, and overall productivity.
6. **Feedback Collection:** Collect feedback from employees, HR, and managers on the effectiveness and ease of use of Ema SAOS.



Sample Prompts and Responses



User Prompt: "Ema, analyze the skill gaps for the data science team."

Ema SAOS Response: "Analyzing the profiles of the data science team... The following skill gaps have been identified:

1. Advanced Machine Learning: 60% of the team lacks this skill.
2. Data Visualization Tools: 40% of the team needs upskilling in this area.
3. Python Programming: 30% of the team requires intermediate to advanced training."

User Prompt: "Ema, create personalized upskilling plans for the data science team."

Ema SAOS Response: "Generating personalized upskilling plans... Here are the recommendations:

1. John Doe: Advanced Machine Learning course on Coursera, Data Visualization with Tableau on Udemy.
2. Jane Smith: Intermediate Python Programming on edX, Advanced Data Visualization on Udacity.
3. Mark Johnson: Python for Data Science on Khan Academy, Advanced Machine Learning on Coursera."

User Prompt: "Ema, assign pre-joining training modules to the new hires for the upcoming project."

Ema SAOS Response: "Assigning pre-joining training modules... The following modules have been assigned:

1. Alice Brown: Introduction to Data Science on Coursera, Python Basics on Khan Academy.
2. Bob Green: Data Analysis with Python on edX, Machine Learning Fundamentals on Udacity. Progress will be tracked and reported weekly."

User Prompt: "Ema, allocate resources for the new AI project based on current skills and training progress."

Ema SAOS Response: "Allocating resources... The following team members have been matched to the AI project:

1. John Doe - Lead Data Scientist
2. Jane Smith - Data Analyst
3. Mark Johnson - Python Developer Adjustments will be made dynamically as training progresses."

Feasibility Demonstration

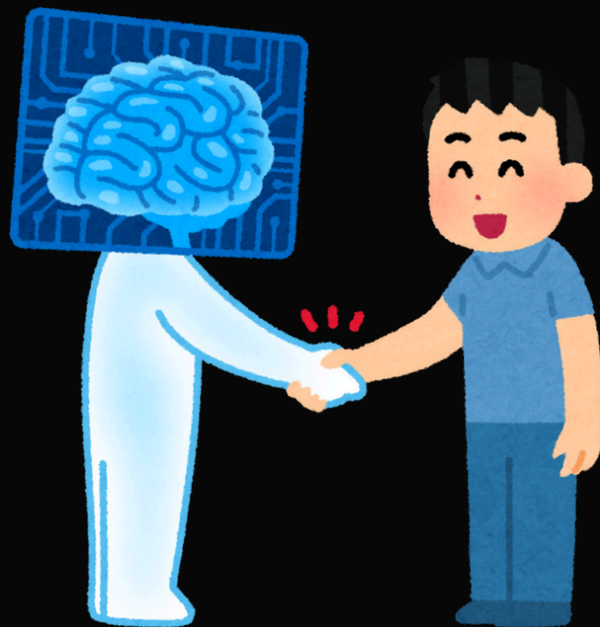
These synthetic interactions (prompts) show how Ema SAOS can effectively analyze skill gaps, create tailored training plans, manage onboarding processes, and allocate resources based on real-time data. The quick and accurate responses indicate the potential for significant improvements in efficiency and productivity.

Success Metrics (KPI)

- **Time-to-Fill Positions:**
 - Metric: Average time taken to fill open positions before and after implementing Ema SAOS.
 - Success Indicator: Reduction in the average time-to-fill positions by a significant percentage (e.g., 30-50%).
- **Training Effectiveness:**
 - Metric: Completion rates of recommended training programs and improvements in employee skill levels.
 - Success Indicator: High completion rates (e.g., above 80%) and measurable skill improvements (e.g., scores on post-training assessments).
- **Onboarding Duration:**
 - Metric: Average time taken to onboard new hires.
 - Success Indicator: Reduction in onboarding duration by a significant margin (e.g., 40-60%).
- **Employee Satisfaction and Retention:**
 - Metric: Employee satisfaction scores from surveys and retention rates.
 - Success Indicator: Improvement in satisfaction scores (e.g., 20% increase) and reduction in turnover rates.
- **Project Delivery Timeliness:**
 - Metric: Percentage of projects delivered on time and within budget.
 - Success Indicator: Increase in the percentage of on-time project deliveries (e.g., 25% increase).
- **Cost Savings:**
 - Metric: Reduction in costs related to hiring contractors and training expenses.
 - Success Indicator: Significant cost savings (e.g., 30-50% reduction in related expenses).
- **Client Satisfaction:**
 - Metric: Client feedback and satisfaction scores regarding project delivery and quality.
 - Success Indicator: Improvement in client satisfaction scores (e.g., 20% increase).

Success Examples

- **Time-to-Fill Reduction:**
 - Before: Average time to fill positions was 60 days.
 - After: Reduced to 30 days with Ema SAOS.
- **Training Completion:**
 - Before: 50% completion rate for training programs.
 - After: 85% completion rate with personalized upskilling plans.
- **Onboarding Efficiency:**
 - Before: Onboarding took an average of 45 days.
 - After: Reduced to 20 days with pre-joining training modules.
- **Employee Satisfaction:**
 - Before: Satisfaction score of 60%.
 - After: Increased to 80% with clear development paths and efficient onboarding.
- **Project Delivery:**
 - Before: 70% of projects delivered on time.
 - After: Increased to 90% with better resource allocation and skill alignment.



Potential Pitfalls

1. **Data Privacy and Security:**
 - Risk: Handling sensitive employee data raises concerns about privacy and security.
 - Mitigation: Implement robust security measures and comply with data protection regulations.
2. **Algorithm Bias:**
 - Risk: AI algorithms may perpetuate biases in skill assessments and recommendations.
 - Mitigation: Regularly audit AI models, diversify training data, and ensure transparency.
3. **User Adoption and Resistance:**
 - Risk: Employees and managers may resist adopting AI-driven processes due to change aversion.
 - Mitigation: Provide thorough training, demonstrate clear benefits, and gather user feedback.
4. **Scalability Issues:**
 - Risk: System performance may degrade as data volume and organizational size increase.
 - Mitigation: Design for scalability, conduct stress testing, and ensure infrastructure readiness.
5. **Accuracy of AI Predictions:**
 - Risk: Inaccurate AI predictions could lead to inefficient resource allocation.
 - Mitigation: Continuously refine AI models, validate predictions, and incorporate human oversight.
6. **Integration Complexity:**
 - Risk: Challenges in integrating Ema SAOS with existing HR and IT systems.
 - Mitigation: Ensure compatibility, provide API integration, and offer technical support.



Thank you



Presentation By:

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