AI-Powered Sales Lead Qualification Workflow

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Executive Summary

The AI-Powered Sales Lead Qualification Workflow is designed to automate and optimize the lead evaluation process for The AI Agency. By integrating AI-based assessment, workflow automation, and structured logging, this system ensures that high-quality leads are prioritized and promptly engaged. Qualified leads receive immediate personalized emails with scheduling options, while unqualified leads are politely informed and stored for future reference. The workflow improves efficiency, reduces human error, and provides comprehensive tracking and analytics for all leads.

Key Features:

- AI-based lead assessment with scoring and categorization.
- Conditional workflow based on company website availability.
- Automated email notifications for qualified and unqualified leads.
- Structured logging in Google Sheets or Excel for analysis.
- Follow-up reminders for qualified leads who do not schedule meetings.

GitHub Link : Sales_lead_qualifier_link

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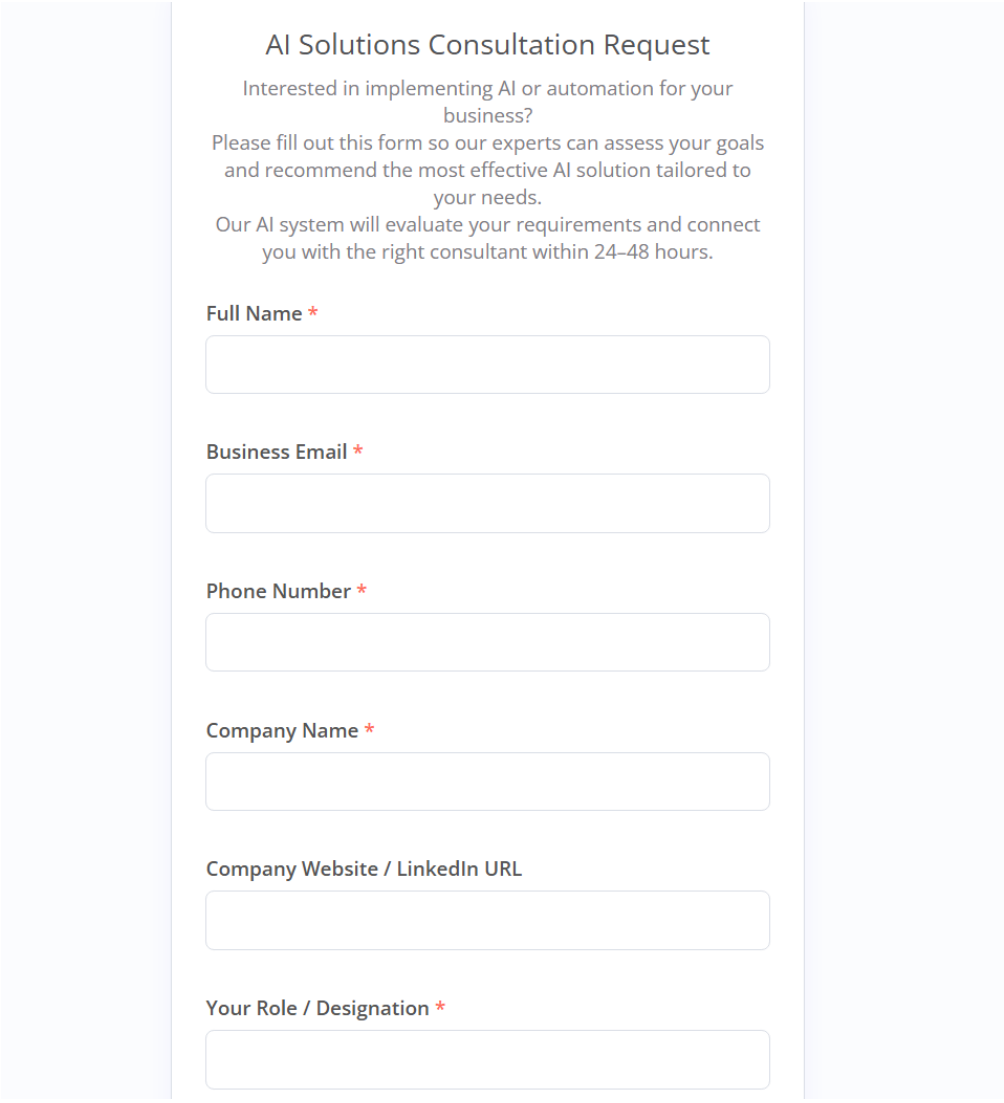
1. Problem Statement

Businesses receive numerous inbound leads from multiple channels, such as website forms, emails, and social media campaigns. Assessing each lead manually is time-consuming and prone to errors, leading to inconsistent qualification and delays in follow-up communications. Sales teams often struggle to prioritize high-potential leads due to a lack of structured assessment processes.

Solution: Automate lead assessment using an AI-powered workflow that evaluates, qualifies/unqualifies, notifies, and logs leads. This ensures that high-quality leads are prioritized and follow-ups are timely and consistent, improving conversion rates and sales efficiency.



2. Objectives and Scope

Objectives:

- Implement an automated lead qualification system using AI that evaluates the potential of leads accurately.
- Provide immediate email communication for both qualified and unqualified leads.
- Maintain comprehensive records of leads in structured spreadsheets for analysis and tracking.
- Enable automated follow-up reminders for qualified leads who do not schedule meetings immediately.
- Reduce manual intervention and human error in the lead evaluation process.

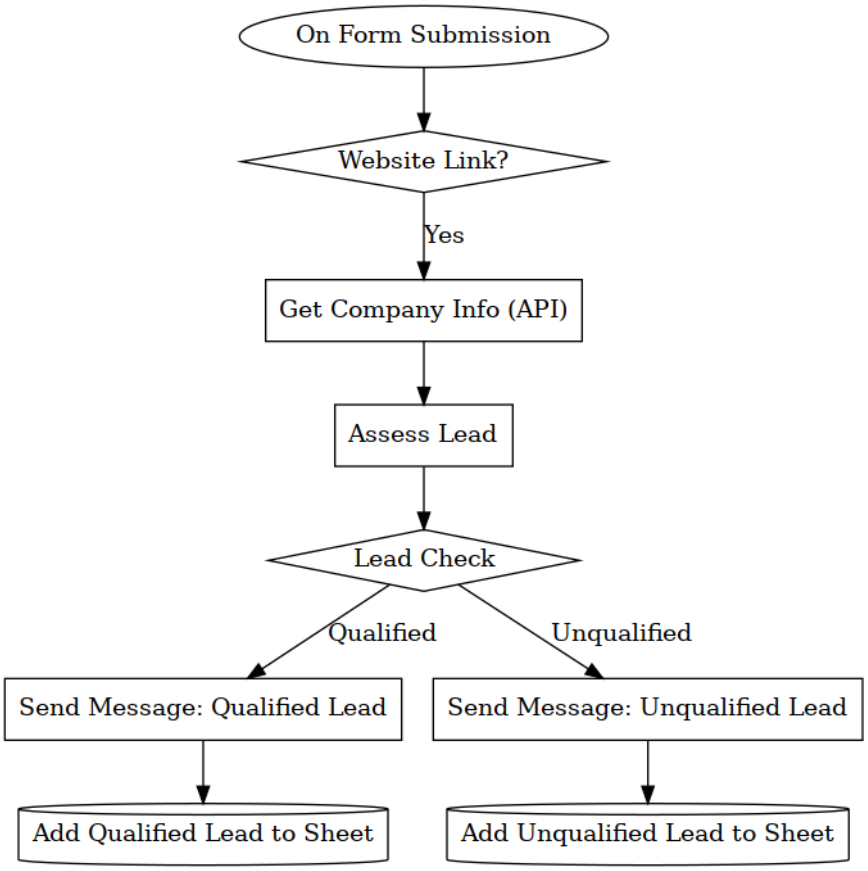
Scope:

- Integration with form submission platforms to capture new leads.
- Use of AI-based lead assessment through a FastAPI backend endpoint.
- Conditional workflow paths based on the availability of company website data.
- Email notifications for both qualified and unqualified leads.
- Data logging into Google Sheets or Excel for record-keeping and future analysis.
- Automation of follow-up reminders for qualified leads.

3. Architecture

The system architecture is designed to be modular, scalable, and easy to maintain. The main components include:

- **Form Submission Trigger (n8n):** Initiates the workflow whenever a new lead is submitted.
- **Conditional Nodes:** Checks if the submitted lead includes a company website link.
- **FastAPI Endpoints:** Handles retrieval of company information and AI-based lead assessment.
- **Email Service (Gmail/SMTP):** Sends notifications to qualified and unqualified leads.
- **Google Sheets / Excel:** Stores detailed records of leads, categorized as qualified or unqualified.
- **n8n Workflow Automation:** Orchestrates the workflow, including conditional logic, API calls, email sending, and data logging.



4. Technology Stack

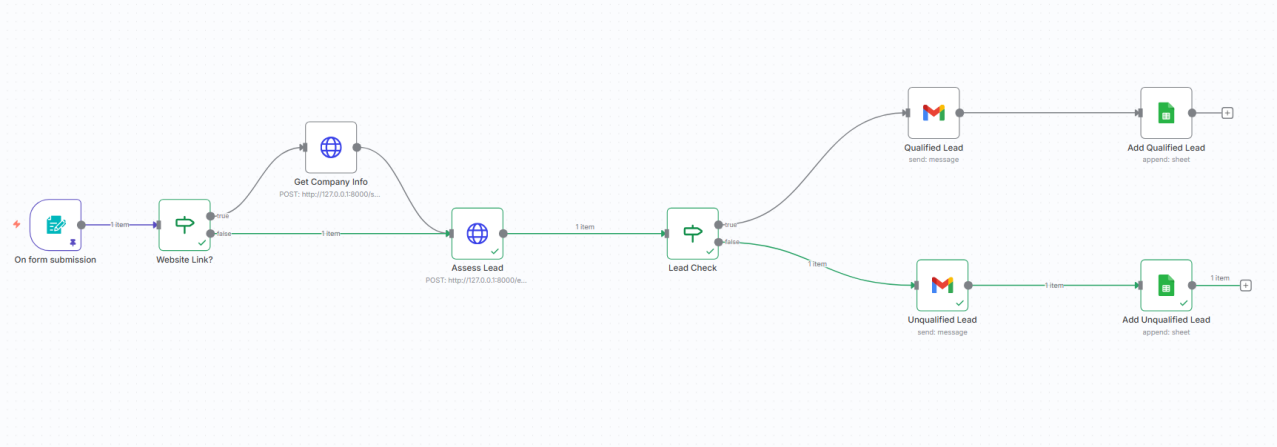
Component	Technology / Tool	Purpose
Workflow Automation	n8n	Orchestrates all workflow steps, including conditional paths and triggers
API Backend	FastAPI	Provides endpoints for AI-based lead assessment and company info retrieval
Data Storage	Google Sheets / Excel	Stores detailed lead information for tracking and analytics
Email	Gmail / SMTP	Sends notifications to leads for both qualified and unqualified outcomes
AI Model	GPT-4o-mini (OpenRouter)	Evaluates leads based on predefined criteria and provides a score and summary
Hosting	Local/Cloud Server	Runs FastAPI endpoints and ensures workflow availability

5. System Design

The system design involves multiple nodes within n8n, each performing a specific function:

Trigger and Initial Check

- Form Submission Node: Captures lead details such as Name, Email, Phone, Company, Role, Industry, Problem, Solution, Timeline, Budget, Comments, and Company Website.
- Conditional Node: Checks if the submitted lead contains a company website.
    - True Path: Proceeds to retrieve company information.
    - False Path: Skips company info retrieval and continues with lead assessment.



Lead Data Enrichment and Assessment

- HTTP Request Node: Retrieves company information from publicly available sources if a website is provided.
- AI Assessment Node: Combines lead and company data and evaluates the lead's potential using predefined criteria including clarity of problem, fit for AI solutions, budget, urgency, industry relevance, and professionalism.

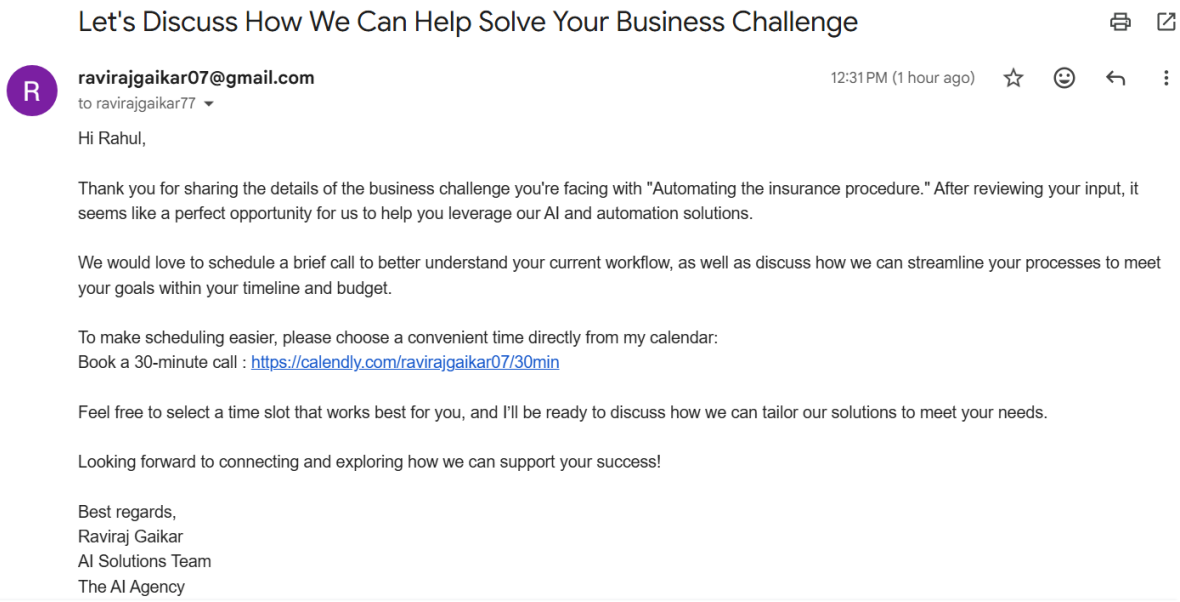
- The AI returns a structured JSON containing lead_score, lead_category, and summary.

Final Qualification Decision

- Conditional Node: Determines if a lead is qualified based on the AI-generated score.
    - Qualified Path: Leads with a score above a defined threshold proceed to the qualified workflow.
    - Unqualified Path: Leads below the threshold are classified as unqualified.

Notification and Logging

- Qualified Lead Path: Sends email with Calendly link for scheduling and logs the lead in a Qualified Leads spreadsheet.
- Unqualified Lead Path: Sends a polite rejection email and logs the lead in an Unqualified Leads spreadsheet



Let's Discuss How We Can Help Solve Your Business Challenge

R **ravirajgaikar07@gmail.com** 12:31 PM (1 hour ago)
to ravirajgaikar77

Hi Rahul,

Thank you for sharing the details of the business challenge you're facing with "Automating the insurance procedure." After reviewing your input, it seems like a perfect opportunity for us to help you leverage our AI and automation solutions.

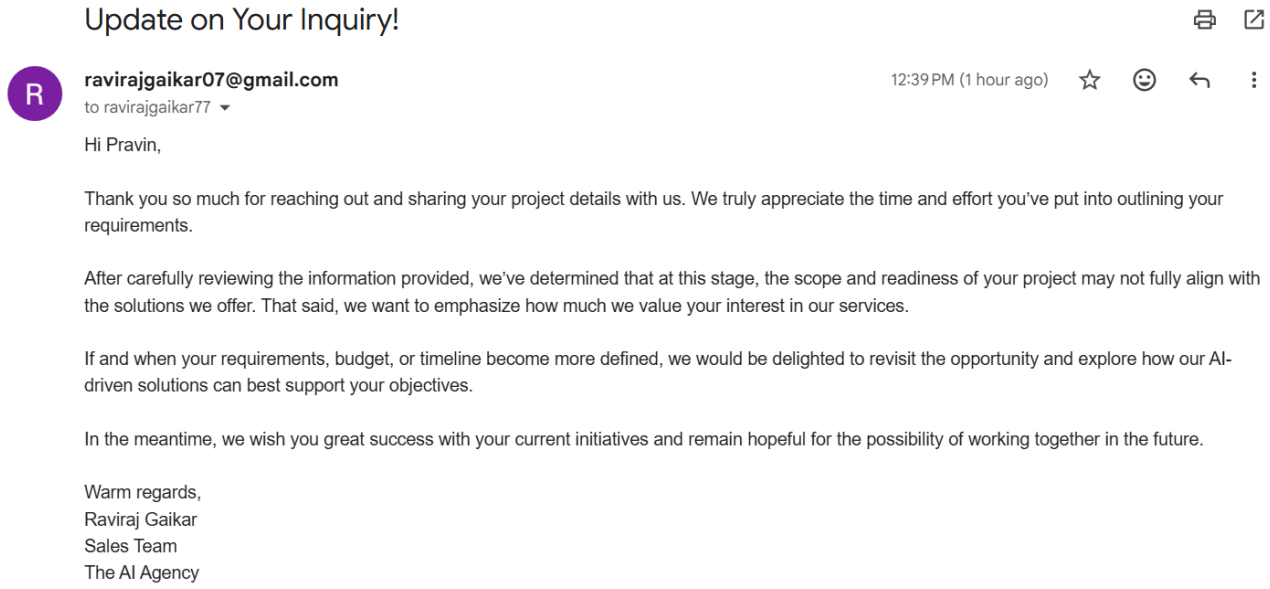
We would love to schedule a brief call to better understand your current workflow, as well as discuss how we can streamline your processes to meet your goals within your timeline and budget.

To make scheduling easier, please choose a convenient time directly from my calendar:
Book a 30-minute call : https://calendly.com/ravirajgaikar07/30min

Feel free to select a time slot that works best for you, and I'll be ready to discuss how we can tailor our solutions to meet your needs.

Looking forward to connecting and exploring how we can support your success!

Best regards,
Raviraj Gaikar
AI Solutions Team
The AI Agency



Update on Your Inquiry!

R

ravirajgaikar07@gmail.com
to ravirajgaikar77

12:39 PM (1 hour ago)

Hi Pravin,

Thank you so much for reaching out and sharing your project details with us. We truly appreciate the time and effort you've put into outlining your requirements.

After carefully reviewing the information provided, we've determined that at this stage, the scope and readiness of your project may not fully align with the solutions we offer. That said, we want to emphasize how much we value your interest in our services.

If and when your requirements, budget, or timeline become more defined, we would be delighted to revisit the opportunity and explore how our AI-driven solutions can best support your objectives.

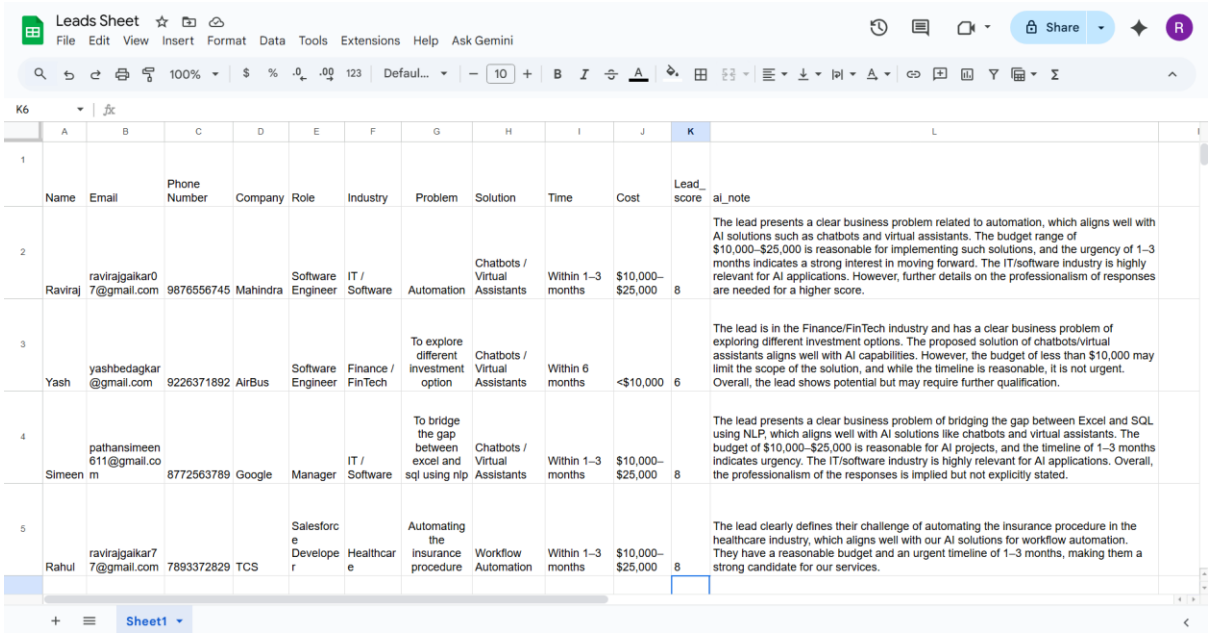
In the meantime, we wish you great success with your current initiatives and remain hopeful for the possibility of working together in the future.

Warm regards,
Raviraj Gaikar
Sales Team
The AI Agency

6. Implementation

Workflow Steps:

1. Trigger workflow on new form submission.
2. Check for the presence of a company website.
3. Retrieve company information if a website exists.
4. Assess lead via AI endpoint using combined lead and company data.
5. Determine lead qualification using Conditional Node.
6. Send email notifications:
    - Qualified leads receive an email with Calendly link and follow-up reminders.
    - Unqualified leads receive a polite rejection email.
7. Log lead data into Google Sheets or Excel.



Leads Sheet

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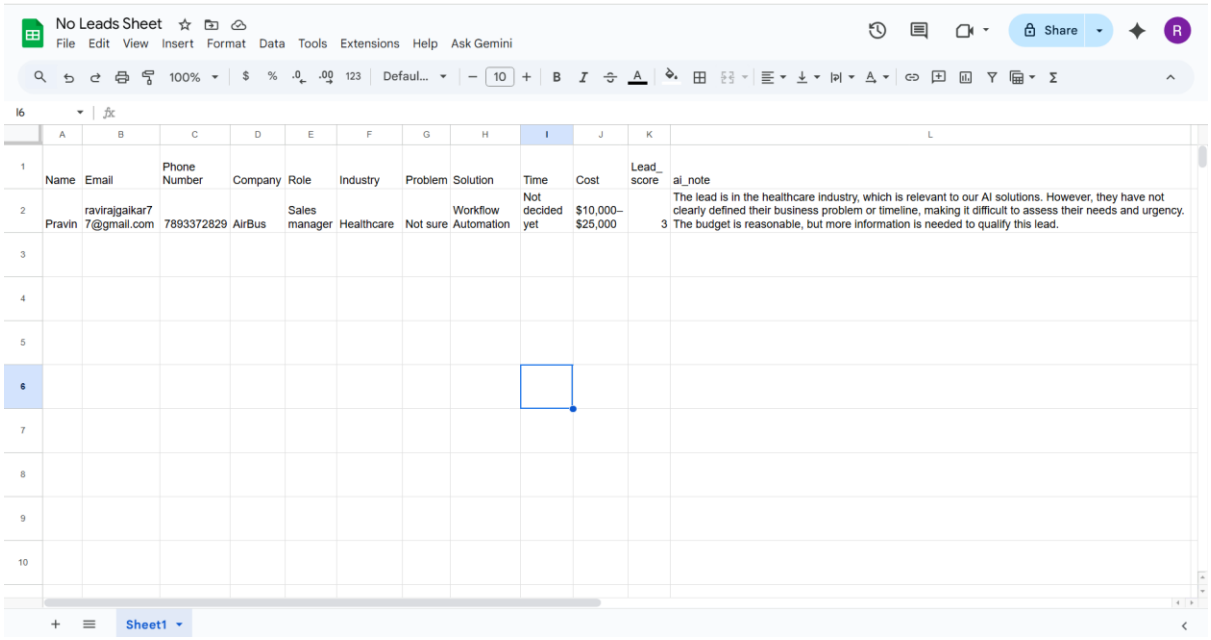
	A	B	C	D	E	F	G	H	I	J	K	L
1	Name	Email	Phone Number	Company	Role	Industry	Problem	Solution	Time	Cost	Lead_score	ai_note
2	Raviraj	ravirajgaikar07@gmail.com	9876556745	Mahindra	Software Engineer	IT / Software	Automation	Chatbots / Virtual Assistants	Within 1–3 months	$10,000–$25,000	8	The lead presents a clear business problem related to automation, which aligns well with AI solutions such as chatbots and virtual assistants. The budget range of $10,000–$25,000 is reasonable for implementing such solutions, and the urgency of 1–3 months indicates a strong interest in moving forward. The IT/software industry is highly relevant for AI applications. However, further details on the professionalism of responses are needed for a higher score.
3	Yash	yashbedagkar@gmail.com	9226371892	AirBus	Software Engineer	Finance / FinTech	To explore different investment option	Chatbots / Virtual Assistants	Within 6 months	<$10,000	6	The lead is in the Finance/FinTech industry and has a clear business problem of exploring different investment options. The proposed solution of chatbots/virtual assistants aligns well with AI capabilities. However, the budget of less than $10,000 may limit the scope of the solution, and while the timeline is reasonable, it is not urgent. Overall, the lead shows potential but may require further qualification.
4	Simeen	pathansimeen611@gmail.com	8772563789	Google	Manager	IT / Software	To bridge the gap between excel and sql using nlp	Chatbots / Virtual Assistants	Within 1–3 months	$10,000–$25,000	8	The lead presents a clear business problem of bridging the gap between Excel and SQL using NLP, which aligns well with AI solutions like chatbots and virtual assistants. The budget of $10,000–$25,000 is reasonable for AI projects, and the timeline of 1–3 months indicates urgency. The IT/software industry is highly relevant for AI applications. Overall, the professionalism of the responses is implied but not explicitly stated.
5	Rahul	ravirajgaikar77@gmail.com	7893372829	TCS	Salesforce Developer	Healthcare	Automating the insurance procedure	Workflow Automation	Within 1–3 months	$10,000–$25,000	8	The lead clearly defines their challenge of automating the insurance procedure in the healthcare industry, which aligns well with our AI solutions for workflow automation. They have a reasonable budget and an urgent timeline of 1–3 months, making them a strong candidate for our services.

Sheet1



No Leads Sheet

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	A	B	C	D	E	F	G	H	I	J	K	L
1	Name	Email	Phone Number	Company	Role	Industry	Problem	Solution	Time	Cost	Lead_score	ai_note
2	Pravin	ravirajgaikar77@gmail.com	7893372829	AirBus	Sales manager	Healthcare	Not sure	Workflow Automation	Not decided yet	$10,000–$25,000	3	The lead is in the healthcare industry, which is relevant to our AI solutions. However, they have not clearly defined their business problem or timeline, making it difficult to assess their needs and urgency. The budget is reasonable, but more information is needed to qualify this lead.
3												
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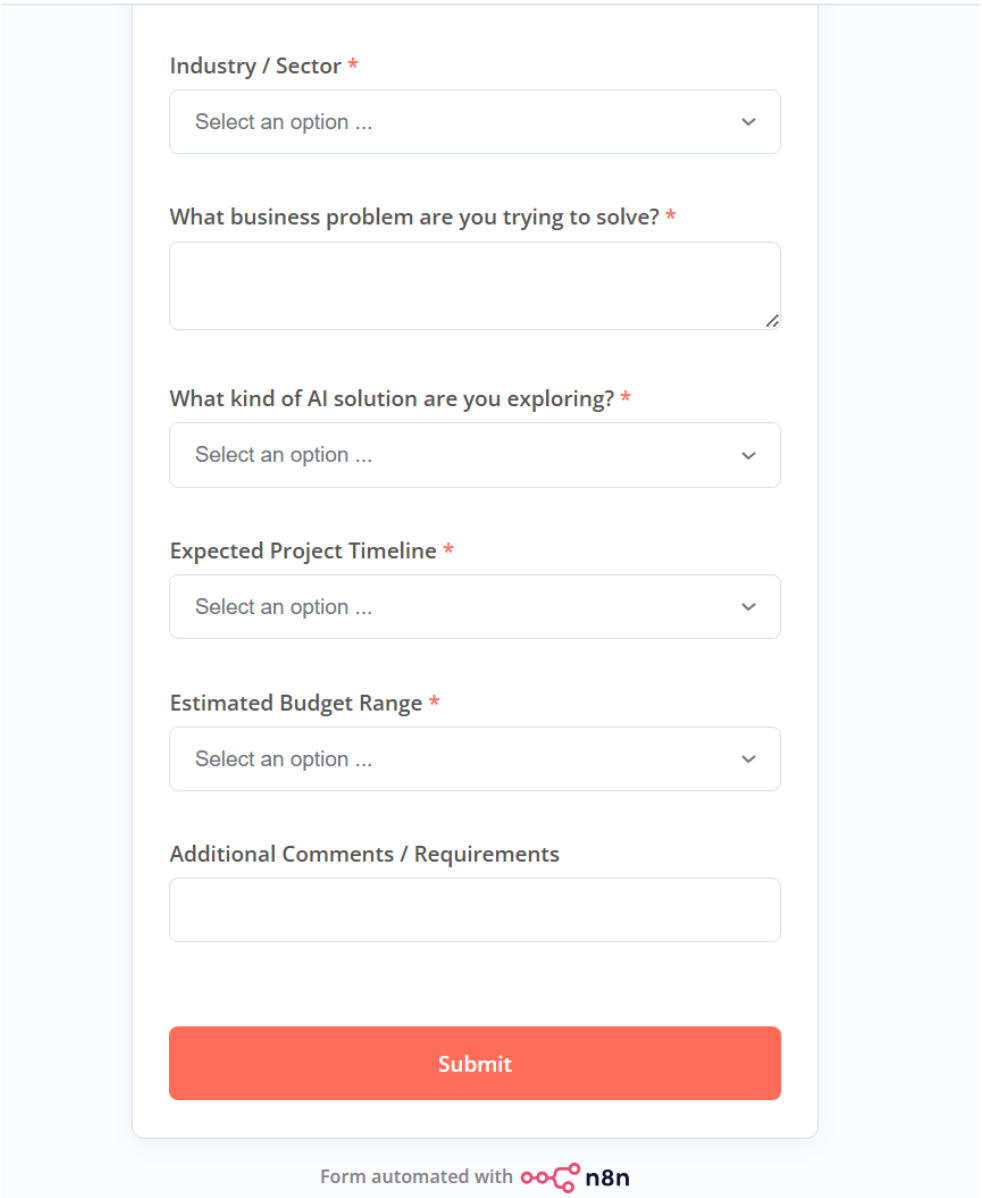
Sheet1

7. Deployment & Running

- Deploy the FastAPI backend on a local or cloud server.
- Configure n8n with triggers, conditional nodes, HTTP Request nodes, email nodes, and Google Sheets nodes.
- Secure API keys and credentials for email and Google Sheets access.
- Conduct initial testing with sample lead submissions to ensure workflow accuracy.
- Schedule workflow to run continuously or trigger on new submissions.



8. Testing and Validation

Test Scenarios:

- Lead with website: Ensure company info is retrieved and AI assessment completes.
- Lead without website: Ensure AI assessment still functions with available data.
- Qualified leads: Verify emails are sent and entries appear in the Qualified Leads sheet.
- Unqualified leads: Verify rejection emails are sent and entries appear in the Unqualified Leads sheet.
- Follow-up reminders: Confirm follow-ups are triggered correctly for qualified leads who do not book a meeting.

9. Future Improvements

- Integrate with CRM systems (HubSpot, Salesforce) for centralized lead tracking.
- Enhance AI model scoring by including additional criteria such as company size, growth stage, and technology stack.
- Expand notification channels to SMS, WhatsApp, and Slack.
- Develop real-time dashboards for monitoring lead flow, qualification rates, and conversion metrics.
- Implement automated re-engagement campaigns for unqualified leads after a defined period.

10. Security, Privacy, and Cost

- Security: Use encrypted connections (HTTPS), secure API keys, and access-controlled servers.
- Privacy: Limit storage of personal data; comply with GDPR and other relevant privacy regulations.
- Cost: Primarily API usage (OpenRouter GPT-4o-mini), n8n hosting, email service provider costs, and server hosting for FastAPI.

11. References

- n8n Documentation: https://docs.n8n.io
- FastAPI Documentation: https://fastapi.tiangolo.com
- Google Sheets API: https://developers.google.com/sheets
- OpenRouter API: https://openrouter.ai

12. Appendix

- **Prompt Used for Lead Assessment:**

```
You are an AI-powered sales assistant working for an AI service provider agency.
We specialize in delivering cutting-edge AI solutions tailored to businesses across various industries.
Our agency focuses on providing AI-driven solutions for automating processes, enhancing decision-making, and
improving operational efficiency.
When evaluating leads, consider the following criteria to score them from 0-10:
- Clarity of the business problem: How clearly the lead defines their challenges.
- Fit with AI solutions: How well their problem aligns with the AI solutions we offer.
- Budget and urgency: The lead's budget for AI solutions and how urgent their need is.
- Industry relevance: How relevant their industry is to the AI solutions we provide (e.g., healthcare, finance, e-commerce).
- Professionalism of responses: The quality and professionalism of their communication.

Return valid JSON only with the following fields:
{{
  "lead_score": "",  # Score from 0 to 10
  "lead_category": "",  # Categories could be "Qualified", "Needs more info", "Unqualified", etc.
  "summary": ""  # A brief summary of why this lead was categorized the way it was
}}

Lead details:
- Industry: {data.get("Industry")}
- Problem: {data.get("Problem")}
- Solution: {data.get("Solution")}
- Timeline: {data.get("Timeline")}
- Budget: {data.get("Budget")}
- Comments: {data.get("Comments")}
- Company Info: {data.get("Company_info")}
```