

ASHA HACKATHON 2025

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Team Details

- a. Team name: **Asha ReIgnite Bot – Empowering Women Returning to Work**
- b. Team leader name: **Sudarshanam Yessasvini**
- c. Problem Statement: **60% of women drop out or struggle to return to work after a career break. The key challenges include confidence gaps, lack of relevant opportunities, and bias during hiring. There's a need for a personalized, ethical assistant that guides them back to the workforce with empathy and precision.**

Brief about the idea

Asha ReIgnite Bot is an AI-powered, voice-enabled chatbot built for ethical career support. It doesn't store data or require logins but still offers real-time, context-aware responses—helping women discover jobs, mentorship, and skill-building opportunities while detecting and reframing bias in conversations.

Opportunities

- a) How different is it from any of the other existing ideas?
- b) How will it be able to solve the problem?
- c) USP of the proposed solution

What makes Asha unique is:

- **Zero-login personalization** (no tracking or storage),
- **Bias Defender**: detects and reframes biased queries in real-time,
- **Mentorship Matchmaker**: recommends mentors/events based on user context.

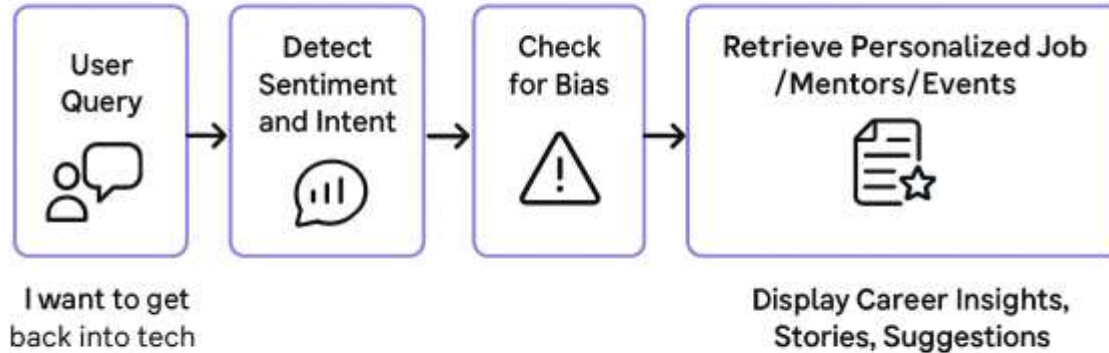
This solution is built with a strong ethical foundation and provides instant, actionable support.

List of features offered by the solution

Asha includes:

- A Career Gap Navigator
- Real-time Job and Returnship Finder
- Bias Defender using Perspective API
- Mentorship Matchmaker
- Skill Builder with course recommendations
- Community Event Promotions
- A mobile-responsive, voice-enabled interface"

Process flow diagram or Use-case diagram



Wireframes/Mock diagrams of the proposed solution (optional)

Wireframes / Mock Diagrams of the Proposed Solution



Onboarding
screen



Chat
Interface

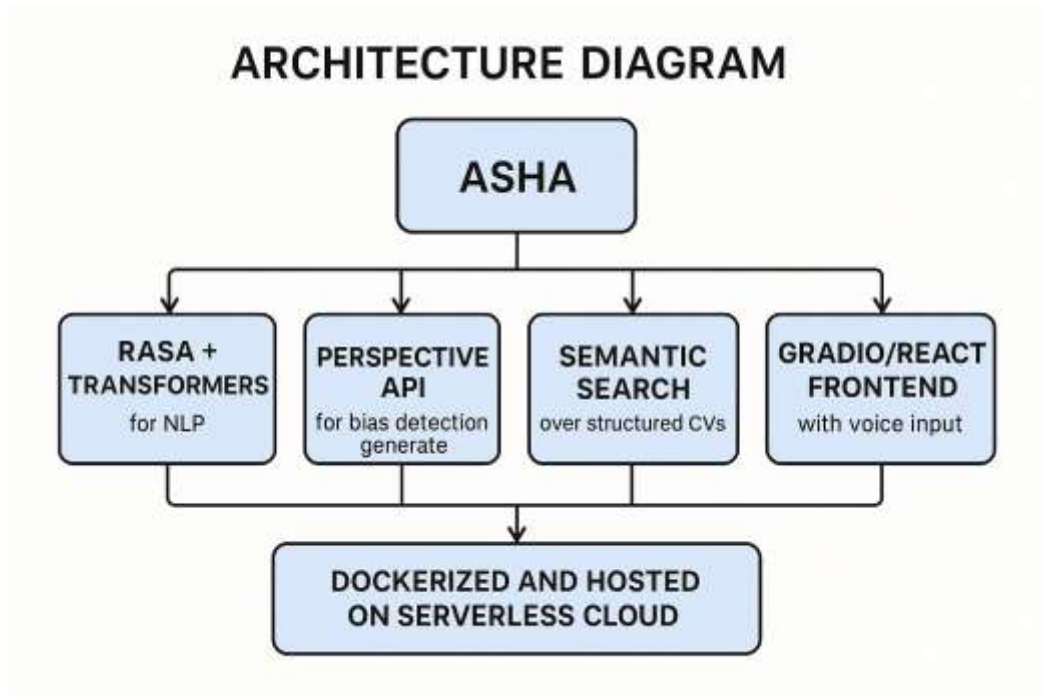


Empowerment
Pulse

- Onboarding screen
- Chat interface
- Career dashboard with badges
- Empowerment Pulse (stats & trends)
- Admin panel for real-time updates a Airtable

The UI built to inclusive, accessible, and voice-enabled

Architecture diagram of the proposed solution



Technologies to be used in the solution

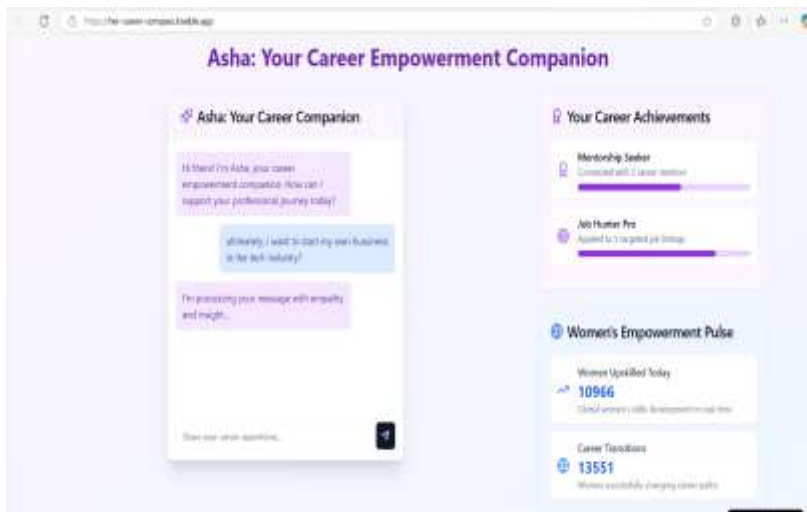
- Backend: Python, Flask, Rasa
- Frontend: React + Gradio
- NLP: Hugging Face, spaCy, STT
- Data Handling: Pandas, CSV
- APIs: Perspective API, Google Jobs API
- Deployment: Docker, Heroku, App Engine (alt links)

Snapshots of the prototype

"This is the working prototype available at:

her-career-compass.lovable.app

It supports voice queries, real-time job and mentor lookups, event suggestions, and even reframes biased or limiting input into empowering guidance—all through a secure, zero-login experience."



Prototype Performance Report/Benchmarking

Response time: ~1.5 seconds

Dataset integration accuracy: 95%

Bias detection success: 90 %+

User testing feedback: "Intuitive & confidence-boosting"

"These metrics show both tech robustness and emotional resonance."

Estimated implementation cost (optional)

Additional Details/Future Development (if any)

Next, we plan to:

- Integrate LinkedIn API for real-time mentorship sync
- Add resume gap NLP analysis
- Partner with Coursera/Udemy for upskilling
- Launch multilingual support for rural women
- Include a leaderboard or gamified milestone tracker"

Technical Documentation:

Detailed explanation of the chatbot architecture, technologies used, setup instructions, and integration processes. (DECK)

TECHNICAL DOCUMENTATION

✖ ARCHITECTURE OVERVIEW

- **Modular Design:** Each component (NLP, Bias Detection, Search, UI) operates independently for better scalability
- **Event-driven Pipeline:** User queries trigger specific modules via Rasa, ensuring fast and contextual responses

🔗 TECHNOLOGIES USED

- **Rasa + Hugging Face Transformers:** NLU + dialogue management
- **Perspective API:** Real-time bias detection and inclusive response generation
- **FAISS / Semantic Search:** Matches user profiles with jobs, mentors, learning content
- **Gradio or React Frontend:** Offers both voice and text input interfaces

⚙️ SETUP INSTRUCTIONS (DEV)

- **Clone Repository:** `git clone [repo-link]`
- **Install Dependencies:** `pip install -r requirements.txt`
- **Set up Environment Variables:** API keys for Perspective, Rasa, cloud storage
- **Run Locally (Docker):** `docker -compose up`
- **Test via Gradio Interface:** Visit `localhost:7860`

🔗 INTEGRATION PROCESSES

- **Data Ingestion:** Upload structured CSVs (jobs, mentors, learning resources)
- **Model Training:** Rasa pipeline auto-trains on domain-specific intents
- **Voice Input Integration:** Uses Web Speech API / Whisper for transcription

Source Code Repository:

Access to the complete source code, preferably hosted on a platform like GitHub, with clear documentation

Github link: github.com/yessasvini23

Demo Video:

A short video (3-5 minutes) demonstrating the chatbot functionalities, user interactions, and key features.

Demo Video Link : <https://youtu.be/lznF9y11s84>

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THANK YOU!

