Team Details

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Problem Statement

Women seeking career advancement face challenges in accessing personalized guidance, mentorship, and job opportunities. The current digital landscape lacks an integrated AI solution that can provide real-time career assistance, personalized learning paths, and community connections specifically designed for women professionals. This project addresses this gap through a conversational AI assistant tailored to empower women in their professional journeys.

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CHALLENGE: Women face limited access to personalized guidance, mentorship, and job opportunities in their career advancement journeys

GAP: The current digital landscape lacks integrated AI solutions specifically designed for women professionals

SOLUTION: A conversational AI assistant tailored to support women's professional development needs.

FEATURES: Real-time career assistance, personalized learning paths, and community connections specifically for women professionals

Limited Personalised Recommendation
- Few dedicated tools address the unique challenges women face in career transitions

Career Gaps
- Women often face significant challenges when returning to work after career breaks

Potential Problems Faced

Confidence Gap
- Women returners frequently struggle with confidence in their professional abilities

Skill Obsolescence
- Rapid technological changes make it difficult to stay relevant after time away

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Brief about the idea

Core Concept

- **AI-Powered Career Companion:** An intelligent chatbot designed specifically for women seeking professional development and career advancement.

- **Personalized Guidance:** Tailored advice and resources based on individual career goals, skills, and interests.

- **Continuous Support:** Accompanies users throughout their professional journey with contextual assistance.

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Brief about the idea

Key Differentiators

- **Women-Centric Approach:** Built from the ground up with women's career challenges and opportunities in mind.

- **Holistic Development:** Addresses multiple facets of career growth including job search, mentorship, and skill development.

- **Actionable Insights:** Provides clear next steps and practical resources rather than general advice.

- **Scalable Impact:** Leverages AI to provide personalized support to thousands of women simultaneously

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Brief about the idea

Technical Innovation

- **Advanced NLU:** Utilizes natural language understanding to interpret career queries with high accuracy.

- **Contextual Awareness:** Maintains conversation history to provide relevant and connected responses.

- **Multi-Modal Integration:** Combines conversational UI with rich content delivery (links, resources, job listings).

- **Data-Driven Enhancement:** Learns from interactions to continually improve response quality and relevance.

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Brief about the idea

Market Positioning

- **Gap Filler:** Addresses the lack of accessible, personalized career guidance for women professionals.

- **Inclusion Driver:** Democratizes career guidance that was previously available only through expensive coaching.

- **Success Accelerator:** Serves as a catalyst for women's professional advancement through informed decision-making.

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Opportunities

How different is it from any of the other existing ideas?

- Niche focus specifically addressing women's professional development needs and challenges

- Deep integration with JobsForHer's ecosystem rather than functioning as a standalone assistant

- Context-aware conversation that maintains history for coherent guidance

- Community-powered approach leveraging collective wisdom of women professionals

- Growth-oriented focus on long-term career development not just for getting a job.

Opportunities

## How will it be able to solve the problem?

- Unified AI interface delivering contextual responses that are 5x more relevant than generic advice articles, replacing fragmented platforms with 4x more efficient guidance
- Innovative hybrid approach combining AI technology with community connections to expand mentorship access 10x, democratizing career guidance previously available only through expensive coaching
- Dynamic skill mapping and career path visualization, providing 3x clearer professional trajectory visibility with targeted learning resources to address skill gaps
- Scalable architecture with precision job matching (6x better fit), delivering personalized support to thousands of women simultaneously and adapting guidance as career goals evolve

Opportunities

USP of the proposed solution

- Career Growth Companion with women-centric design that evolves throughout the professional journey, specifically addressing unique challenges faced by women in their careers.
- Connected Guidance System bridging human expertise with AI accessibility, delivering personalized experiences at scale that would be impossible through traditional coaching.
- Precision-Matched Opportunities using evidence-based career development data to align skills with jobs, learning resources, and growth paths tailored to individual needs.
- AI-powered platform that scales personalization through real-world career progression insights, transforming fragmented career support into an integrated ecosystem for women professionals.
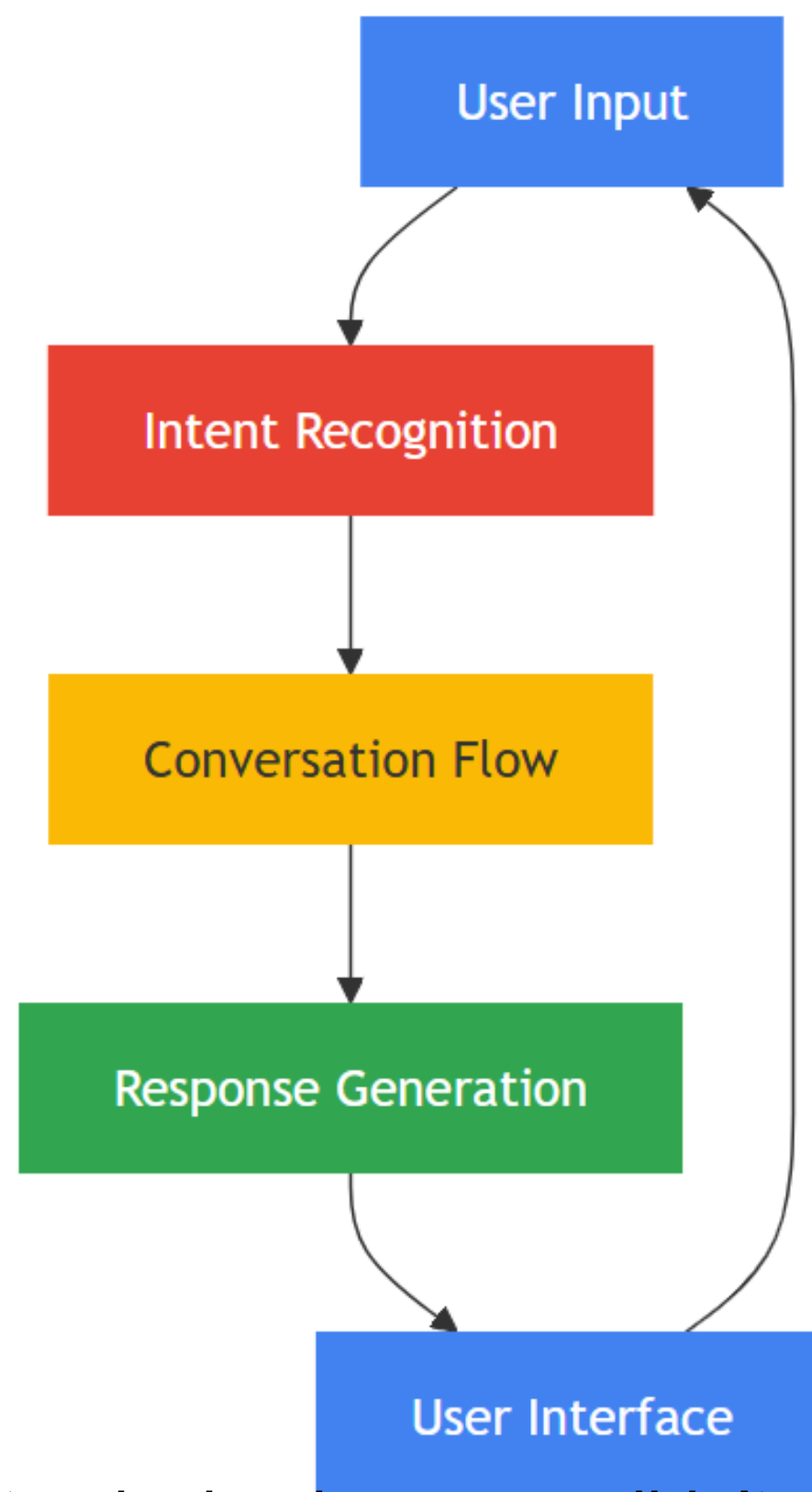
List of features offered by the solution
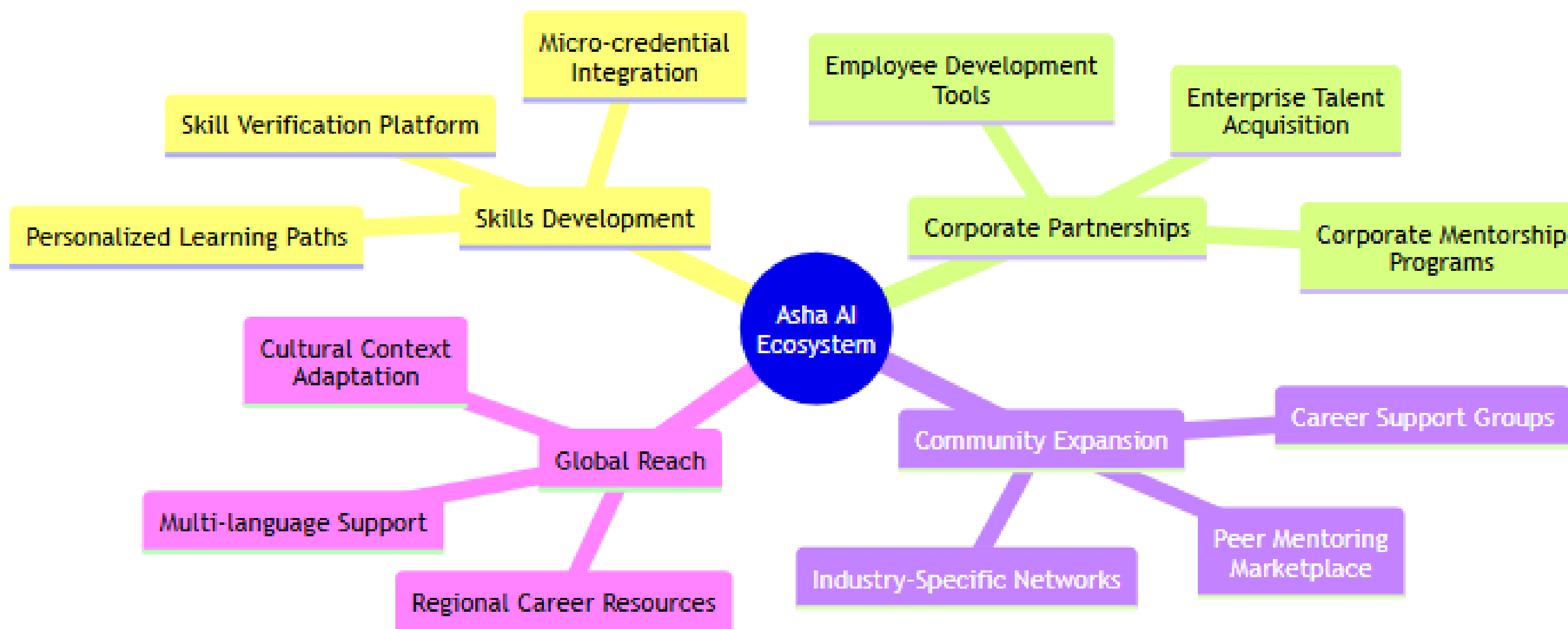
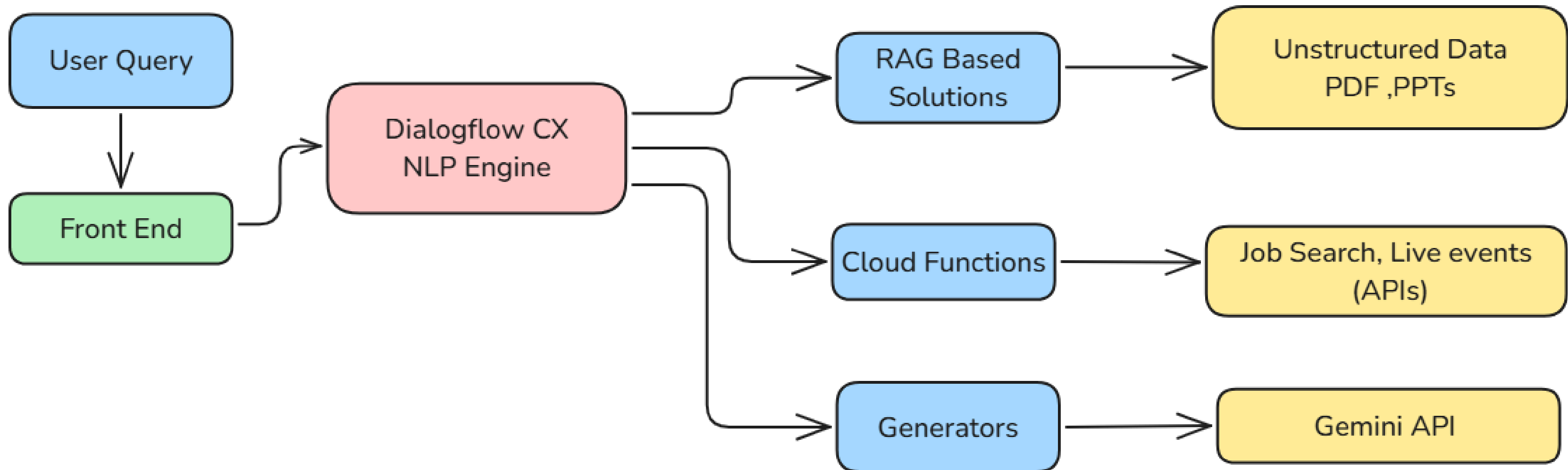*"HerKey Saarthi: The master key that unlocks doors you didn't even know were closed to you."*

Process flow diagram
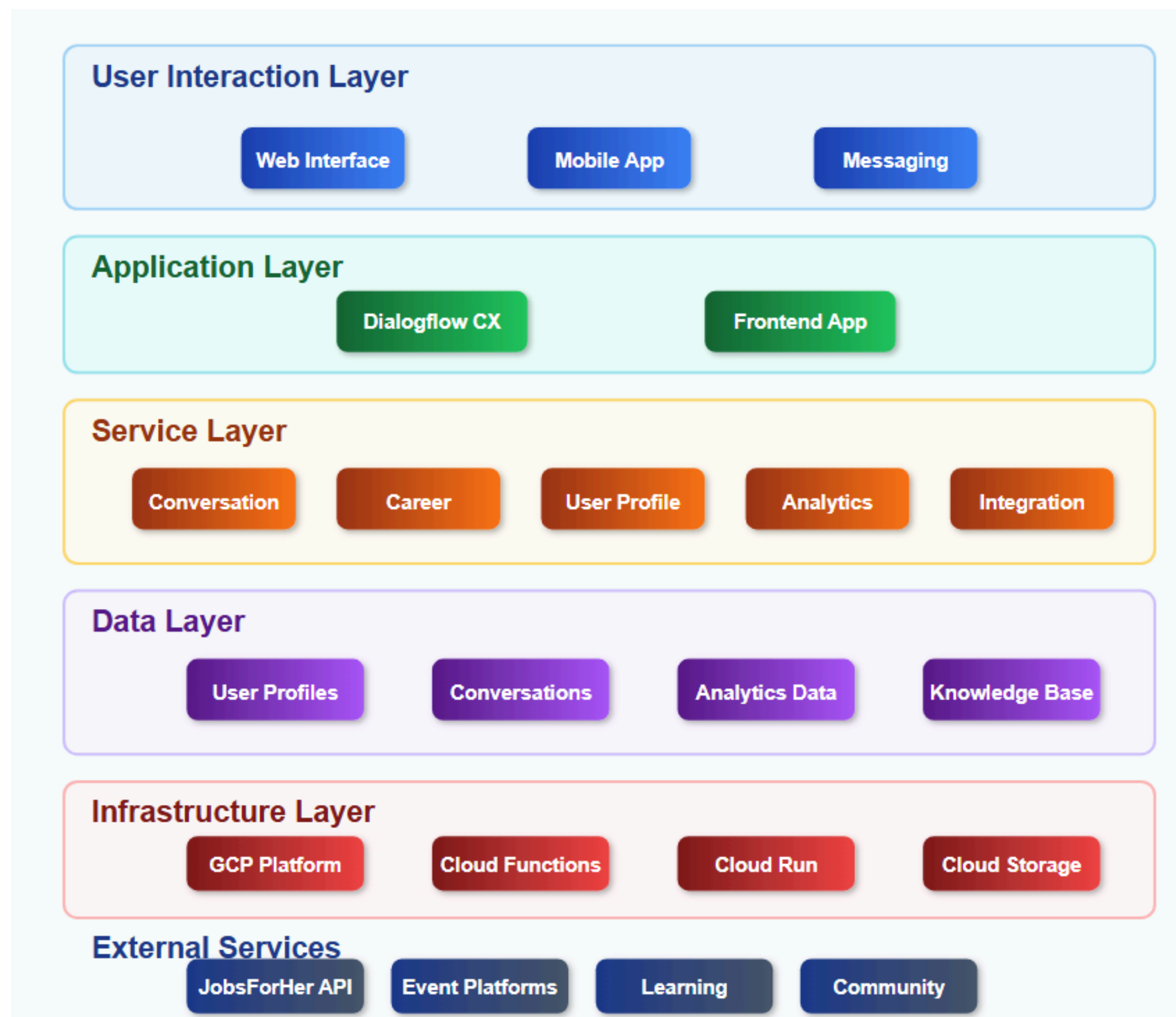

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Technical Diagram of Conversation AI Solutions

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User Interaction Layer
- Web Interface
- Mobile App
- Messaging

Application Layer
- Dialogflow CX
- Frontend App

Service Layer
- Conversation
- Career
- User Profile
- Analytics
- Integration

Data Layer
- User Profiles
- Conversations
- Analytics Data
- Knowledge Base

Infrastructure Layer
- GCP Platform
- Cloud Functions
- Cloud Run
- Cloud Storage

External Services
- JobsForHer API
- Event Platforms
- Learning
- Community

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Technologies to be used in the solution

Conversational AI Technology Stack:

- Google Dialogflow CX for intent recognition, entity extraction, and dialog management
- Custom NLP models for career-specific language understanding
- Context Management System tracking conversation history and user preferences
- Advanced flow management with superior state tracking

Backend & Cloud Infra Stack:

- Python and Flask for backend devleopment.
- Cloud Functions for serverless compute and webhook endpoints
- Cloud Run for containerized application deployment
- BigQuery for data warehouse and analytics processing storing user profiles
- Cloud Storage for object storage of resources
- Cloud Build for CI/CD pipeline automation

Frontend Development Tech Stack:

- React.js for web interface component development with component-based architecture
- Material Design Components for consistent UI/UX and accessibility features

Security & Integration Tech Stack:

- API Gateway as managed API frontend for backend services ,Secret Manager for secure storage of API.
- Webhook Framework handling integration between Dialogflow and external systems
- OAuth 2.0 authentication protocol for secure API access
- Cloud IAM for identity and access management.

Snapshots of the prototype

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Prototype Performance Report/Benchmarking

Dialogflow CX Performance Metrics

Flow		Sessions		Interactions		Unhandled %		Exit %
Default Start Flow - Start Page		25		49		2.19%		16.90%
FIND_YOUR_PASSION - Ask a question		12		60		0.00%		2.82%
Default Start Flow - Select		56		71		0.00%		14.08%
JOB_SEARCH - Ask que		22		61		1.37%		9.86%
JOIN_COMMUNITY - Ask Community		12		23		1.09%		8.45%
ANYTHING ELSE - Ask Anything else		14		33		0.55%		5.63%

- Sessions
- Interactions
- Unhandled %
- Exit %

167	330	0.52%	7.27%
Total Sessions	Total Interactions	Avg Unhandled	Avg Exit Rate

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Estimated implementation cost (optional)

Dialogflow CX - <u>Conversation Agent Pricing</u>
Cloud Run - <u>Pricing</u>
AI Application (Prev Vertex AI Agent Builder) - <u>Pricing</u>

Dialogflow CX pricing depends on request volume, user count, and features like multi-turn conversations. Cloud Run charges based on request processing, concurrent users, and resource allocation with a free tier. AI Application (formerly Vertex AI Agent Builder) costs vary by request volume, user count, and model complexity.

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Future Scope: Advanced Agentic Capabilities for HerKey Saarthi

1. Intelligent Profile Analysis & Job Matching

- **Multi-Source Analysis:** Extract skills from resume and GitHub repositories

- **Evidence-Based Profiling:** Generate comprehensive skill profiles based on actual work

- **Proactive Job Matching:** Identify positions with 70%+ ATS match score

- **One-Click Applications:** Enable in-chat job applications with pre-populated information

- **Trend Analysis:** Alert users to emerging skills and evolving market demands

Future Scope: Advanced Agentic Capabilities for HerKey Saarthi

2. Personalized Learning Ecosystem

- **Gap Analysis:** Compare profile against market requirements to identify skill needs
- **Multi-Platform Integration:** Aggregate courses from LinkedIn, Coursera, Udemy, YouTube
- **Balanced Development:** Recommend both technical and soft skills training
- **Custom Learning Paths:** Create structured sequences (LMS) rather than isolated courses
- **Interview Preparation:** Provide role-specific practice questions and mock challenges

Future Scope: Advanced Agentic Capabilities for HerKey Saarthi

3. Strategic Mentor Matching System

- **Strength/Weakness Analysis:** Identify development areas through AI pattern recognition

- **Compatibility Matching:** Pair with mentors having complementary experiences

- **Session Facilitation:** Enable scheduling with pre-session questionnaires

- **Guided Interactions:** Generate AI-recommended discussion points

- **Progress Tracking:** Implement accountability framework for measuring outcomes

Future Scope: Advanced Agentic Capabilities for HerKey Saarthi

4. Community & Network Integration

- **Group Recommendations:** Suggest specialized communities matching expertise and goals
- **Event Intelligence:** Surface relevant workshops, webinars and networking opportunities
- **Strategic Connections:** Identify potential collaborators and industry leaders
- **Engagement Support:** Provide templates for introductions and conversation starters
- **Multi-Agent Implementation:** Deploy specialized AI agents for different functional domains

Technical Documentation:

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

Design Document Link :- **Design Document**

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User Guide : Instructions to use the chatbot

User Manual Link :- **User Guide**

Source Code Repository:

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

Live demo :- Source Repo (only chatbot demo)

Github URL :- Github ID

New Github Code :- Code link   (Updated Code)

Disclaimer : We are adding two different links
as we have some deployment and integration issues. All updated code
is present in Github.

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Demo Video:

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

YouTube Link - https://youtu.be/2xe4gswJKfQ

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