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OpportunityIQ: AI-Powered Scholarship and Opportunity Intelligence Platform

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ABSTRACT :

This project presents OpportunityIQ, an AI-powered web-based platform that helps students discover suitable scholarships, internships, jobs, and other career opportunities in one place. The system provides tools to track applications, analyze resumes using an Applicant Tracking System (ATS) screener, and identify skill gaps based on career requirements. An OCR-based document vault allows students to store and manage important academic documents and credentials digitally. The platform also includes an AI-powered assistant that helps students understand opportunities, improve their career preparation, and access relevant guidance. A student profile and credentials section organizes academic details, skills, achievements, and certifications for easier access. By combining opportunity tracking, resume analysis, skill development guidance, and document management in a single platform, OpportunityIQ aims to simplify the career preparation process and help students make informed decisions about their academic and professional futures.

Keywords — Artificial Intelligence, Scholarship Discovery, Opportunity Tracking, ATS Resume Screening, Skill Gap Analysis, OCR Document Management, Career Guidance

INTRODUCTION

- Students often face difficulties finding suitable scholarships, internships, jobs, and other career opportunities across multiple websites and platforms.
- Keeping track of application deadlines, submission statuses, and interview schedules can be challenging, especially when managing several opportunities at the same time.
- Many students struggle to prepare effective resumes that meet Applicant Tracking System (ATS) requirements, which may reduce their chances of being shortlisted.
- Students may also lack clarity about the skills required for their desired careers and the steps needed to bridge the gap between their current skills and industry expectations.
- Managing academic certificates, resumes, and other important documents manually can be time-consuming and may lead to difficulties in organizing and retrieving them.
- The proposed system, **OpportunityIQ**, uses artificial intelligence to support resume screening, skill gap analysis, and career guidance while providing opportunity tracking, scholarship discovery, and digital document management in a single platform.

OBJECTIVE:

- To design and develop a web-based platform that helps students discover suitable scholarships, internships, jobs, and other career opportunities.
- To provide an application tracking system that allows students to monitor application statuses, deadlines, and progress in one place.
- To integrate an AI-powered ATS resume screener to evaluate resumes and help students improve their resume quality.
- To develop a skill gap analyzer that identifies missing skills and recommends areas for improvement based on career requirements.
- To implement an OCR-based document vault that enables students to store, organize, and retrieve academic documents and credentials digitally.
- To provide an AI-powered assistant and student profile management features to support career guidance and help students make informed academic and professional decisions.

LITERATURE SURVEY

1. Deep Learning for Plant Disease Detection

Research on image based plant disease detection shows that convolutional neural networks can classify leaf diseases with high accuracy when trained on labelled images. Mohanty et al. demonstrated this on a large public leaf dataset, which made image based diagnosis a standard approach.

2.Coconut-Specific Detection Studies

Several studies have applied deep learning to coconut trees, including work on coconut leaf spot classification, disease and pest detection, and mobile friendly models such as DeepSeqCoco. These studies show that coconut diseases can be recognised from images, but most of them stop at a research prototype and do not provide a complete farmer facing application.

3.Object Detection Models

Object detection models such as the YOLO family locate and classify affected regions in a single pass. This suits leaf images where symptoms appear as patches, because the output shows both what the disease is and where it appears.

4.Language Models in Agriculture Advisory

Large language models can answer farming questions conversationally and in regional languages. The literature and practice also warn that they can produce confident but wrong numbers, such as dosages. This project therefore limits the language model to open conversation and keeps all factual trea

METHODOLOGY

1. User Authentication

The user registers or logs in to the OpportunityIQ platform to access personalized features such as opportunity tracking, resume analysis, skill gap analysis, and document management.

2. Opportunity Discovery

The system helps students explore scholarships, internships, jobs, and other career opportunities based on their interests, qualifications, skills, and career goals.

3. Application Tracking

Students add opportunities to their tracker and update application statuses, deadlines, and progress. The system organizes application details in one place, helping users manage multiple applications efficiently.

4. ATS Resume Screening

The user uploads a resume for analysis. The ATS Resume Screener evaluates the resume's content and structure against relevant screening criteria and provides feedback to help improve its quality and readability.

5. Skill Gap Analysis

The system compares the student's existing skills with the skills required for a selected career role or opportunity. It identifies missing skills and suggests areas for improvement to support career development.

6. Document Processing and Storage

The OCR-based document vault processes uploaded documents to extract readable text where supported. Students can organize and manage academic certificates, resumes, and other important credentials digitally for easier retrieval.

7. AI Assistant Interaction

Students interact with the OpportunityAI assistant to obtain guidance related to scholarships, applications, resumes, skills, and career preparation. The assistant processes user queries and provides relevant responses based on the capabilities and information available in the system.

8. Results and Dashboard Display

The frontend displays resume analysis results, skill gap reports, saved opportunities, application progress, and document details. The student profile organizes personal, academic, and professional information, helping users monitor their progress and make informed career decisions.

EXISTING SYSTEM

1. Manual Opportunity Searching

How It Works:

Students search for scholarships, internships, jobs, and other career opportunities through different websites, job portals, and college announcements.

Drawbacks:

- Information is scattered across multiple platforms.
- Students may miss application deadlines and suitable opportunities.
- Comparing eligibility criteria and requirements takes time.

2. Traditional Application Tracking

How It Works:

Students maintain application details, deadlines, and progress using notebooks, spreadsheets, calendars, or individual websites.

Drawbacks:

- Tracking multiple applications becomes difficult.
- Manual updates can lead to errors or missed deadlines.
- Application details are not managed in one centralized platform.

3. Manual Resume Preparation

How It Works:

Students create and edit resumes using word processors or online resume-building tools and manually check whether their resumes match job requirements.

Drawbacks:

- Students may not understand ATS resume requirements.
- Identifying missing keywords and improving resume structure can be challenging.
- Manual resume evaluation takes time and may overlook important issues.

4. Separate Skill Assessment Tools

How It Works:

Students use online courses, skill assessment websites, and job descriptions to understand the skills required for their desired careers.

Drawbacks:

- Students must use multiple platforms to identify and improve their skills.
- Skill gaps may not be clearly identified for specific career roles.
- Personalized recommendations may be limited.

5. Manual Document Management

How It Works:

Students store resumes, academic certificates, identity documents, and other credentials in local folders, email accounts, or cloud storage services.

Drawbacks:

- Important documents can be difficult to locate quickly.

- Organizing and updating documents requires manual effort.
- Extracting information from scanned documents may require additional tools.

6. General AI Career Assistants

How It Works:

Students use general AI chatbots and online career guidance tools to ask questions about resumes, interviews, scholarships, and career development.

Drawbacks:

- Guidance may be separated from the student's application records and profile.
- Students may need to switch between different platforms to complete career-related tasks.
- General responses may not always address the student's specific skills, qualifications, and opportunities.

PROPOSED SYSTEM

1. Scholarship and Opportunity Discovery

Objective:

Help students find suitable scholarships, internships, jobs, and other career opportunities in one platform.

How It Works:

- Students explore available opportunities based on their interests, qualifications, skills, and career goals.
- Opportunity details, eligibility criteria, application links, and deadlines are organized for easy access.
- Students can save relevant opportunities for future reference.
- The platform helps students manage their career and academic opportunities more efficiently.

2. Application Tracking System

Objective:

Simplify the management of applications and deadlines.

How It Works:

- Students add scholarships, internships, and job applications to a centralized tracker.
- Application statuses are updated to monitor progress.
- Important deadlines and application details are stored in one place.
- A dashboard provides an overview of ongoing and completed applications.

3. ATS Resume Screener

Objective:

Help students evaluate and improve their resumes for job and internship applications.

How It Works:

- Students upload their resumes for analysis.
- The system examines resume content, structure, and relevant keywords against screening criteria.
- The results highlight potential improvements and missing keywords.
- Personalized feedback helps students make their resumes clearer and more suitable for their target opportunities.

4. Skill Gap Analyzer

Objective:

Identify missing skills and support students in preparing for their desired careers.

How It Works:

- Students select a target job role or career path.
- The system compares their existing skills with the skills required for the selected role.
- Missing or underdeveloped skills are highlighted.
- Recommended areas for improvement help students plan their learning and professional development.

5. OCR-Based Document Vault

Objective:

Simplify the storage, organization, and retrieval of academic documents and credentials.
How It Works:

- Students upload resumes, certificates, and other important documents.
- OCR technology extracts readable text from supported scanned documents.
- Documents and extracted information are organized for easier access.
- Students can retrieve important credentials when preparing applications.

6. OpportunityAI Assistant

Objective:

Provide AI-powered guidance for scholarships, applications, resumes, and career development.
How It Works:

- Students interact with the AI assistant through a conversational interface.
- The assistant answers career-related questions and provides relevant guidance.
- Students can seek help with resume improvement, interview preparation, and skill development.
- Responses help students understand their options and make informed academic and professional decisions.

7. Student Profile and Credentials

Objective:

Maintain student information in an organized profile to support personalized career preparation.
How It Works:

- Students maintain their academic details, skills, achievements, and certifications.
- Profile information helps organize their qualifications and career interests.
- Students can review and update their credentials when needed.
- The profile provides a centralized view of information useful for scholarship, internship, and job applications.

SYSTEM REQUIREMENTS

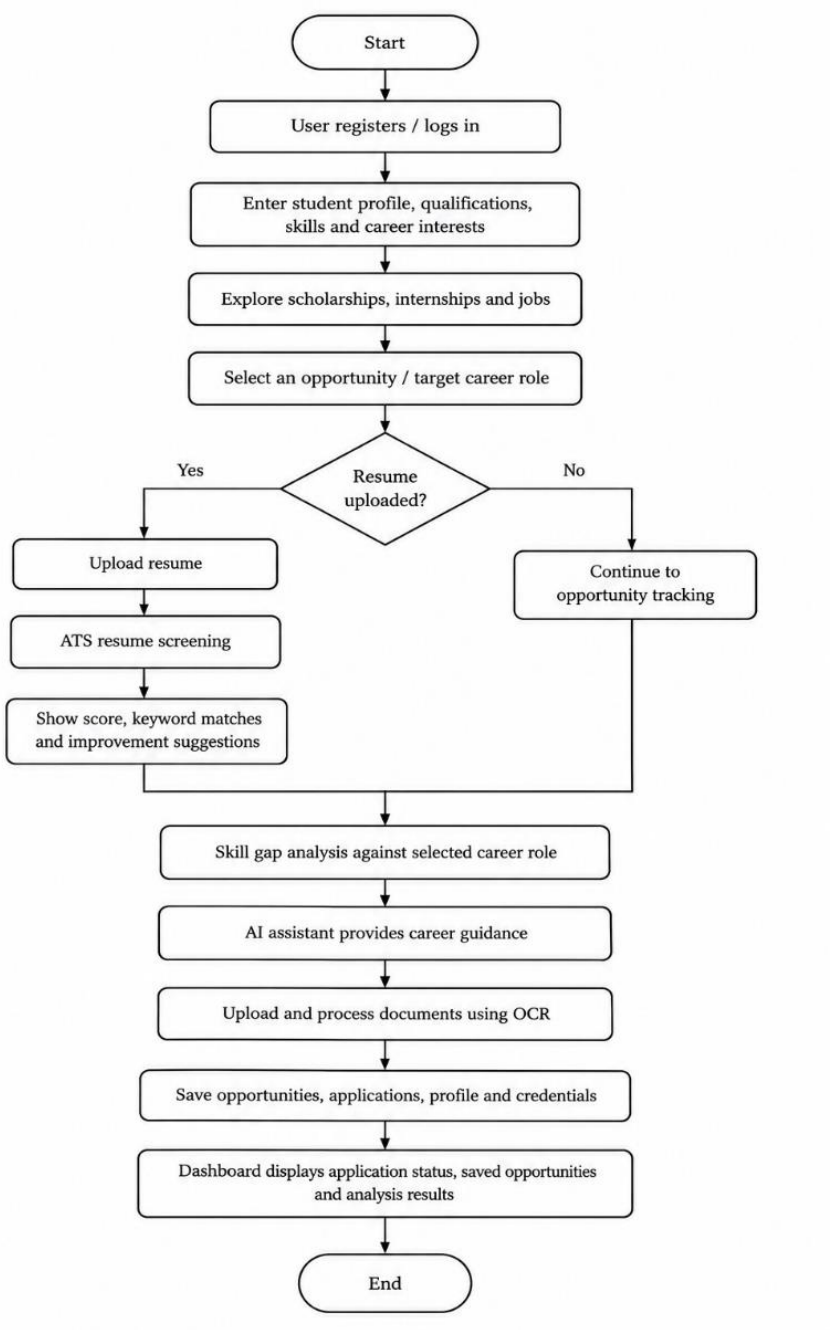
Hardware Requirements

- Processor: Intel i3 or above
- RAM: Minimum 4 GB (8 GB recommended)
- Storage: Minimum 5 GB of free space
- Internet connection required
- Desktop, laptop, or smartphone to access the web application

Software Requirements

- Frontend: Next.js / React.js with TypeScript and Tailwind CSS
- Backend: Node.js with Next.js server-side functionality or API routes
- Database: MongoDB
- AI Integration: Large Language Model (LLM) API for AI-powered assistance and resume analysis
- Resume Analysis: ATS Resume Screener for resume evaluation and keyword analysis
- Skill Analysis: Skill Gap Analyzer for comparing student skills with career requirements
- Document Processing: OCR technology for extracting text from scanned documents
- Authentication: Secure user authentication and session management
- Development Tools: Visual Studio Code, Git, and GitHub
- Package Manager: npm
- Deployment: Render or another compatible web hosting platform
- Browser: Google Chrome, Microsoft Edge, Mozilla Firefox, or any modern web browser

Flow Chart:



MODE OF DESCRIPTION:

- Student Profile and Credentials
- User Login
- Home Dashboard
- Opportunity Discovery
- ATS Resume Screening
- Skill Gap Analysis
- Application Tracking
- OpportunityAI Assistant
- Document Vault
- Student Profile and Credential

IMPLEMENTATION SCREENSHOTS OF OPPORTUNITYIQ

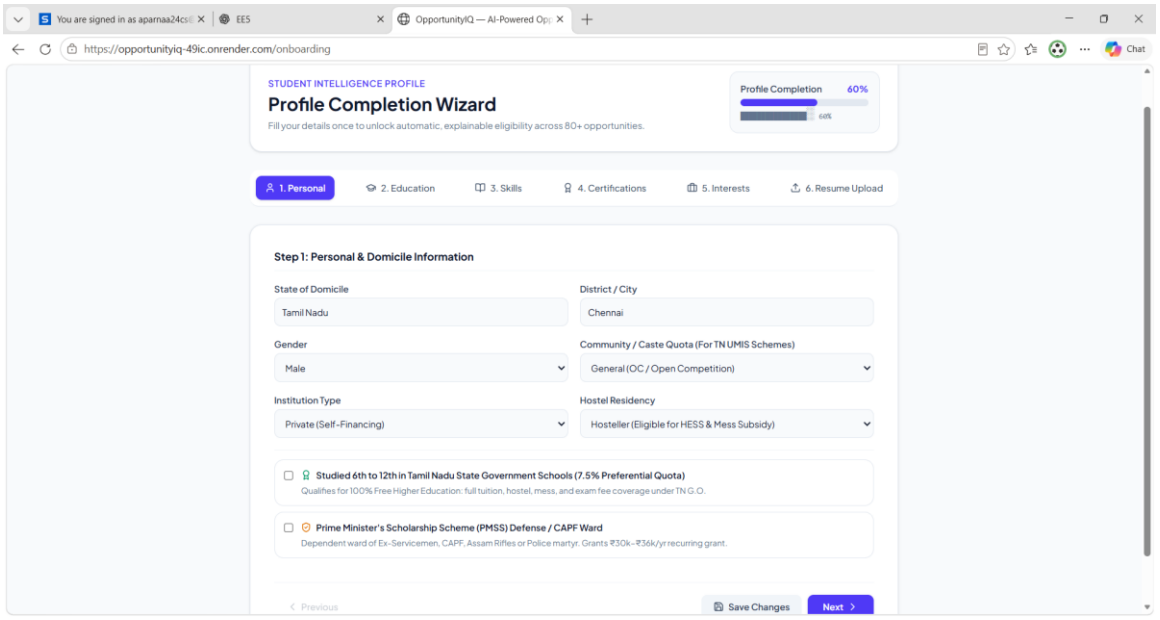


Figure 1. OpportunityIQ profile completion wizard.

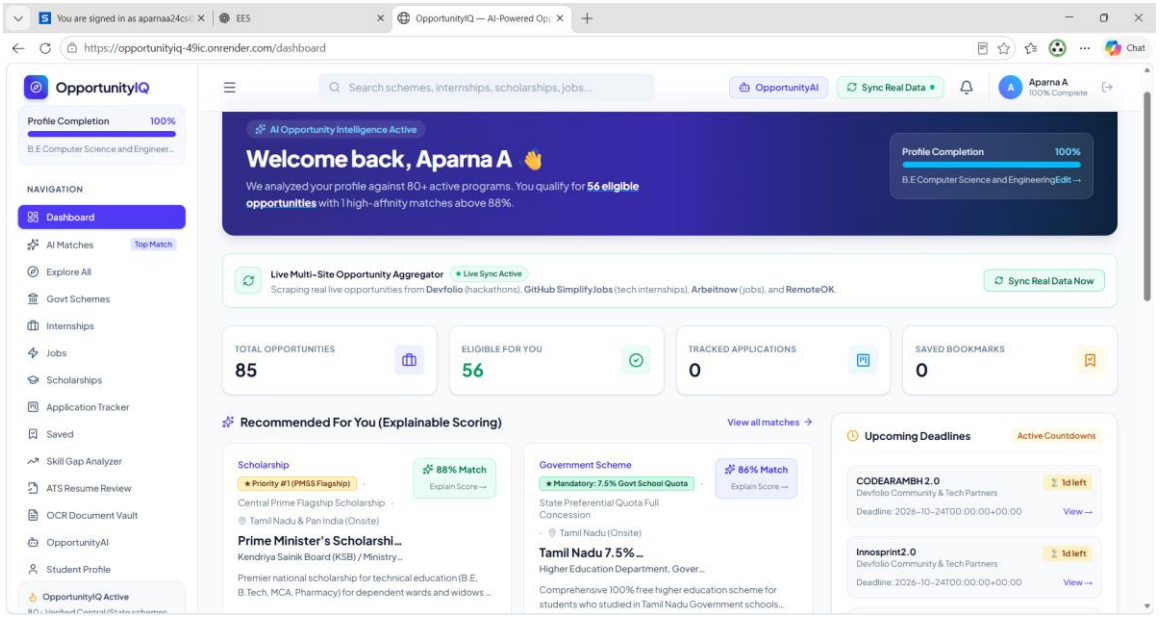


Figure 2. OpportunityIQ dashboard with opportunity statistics and recommendations.

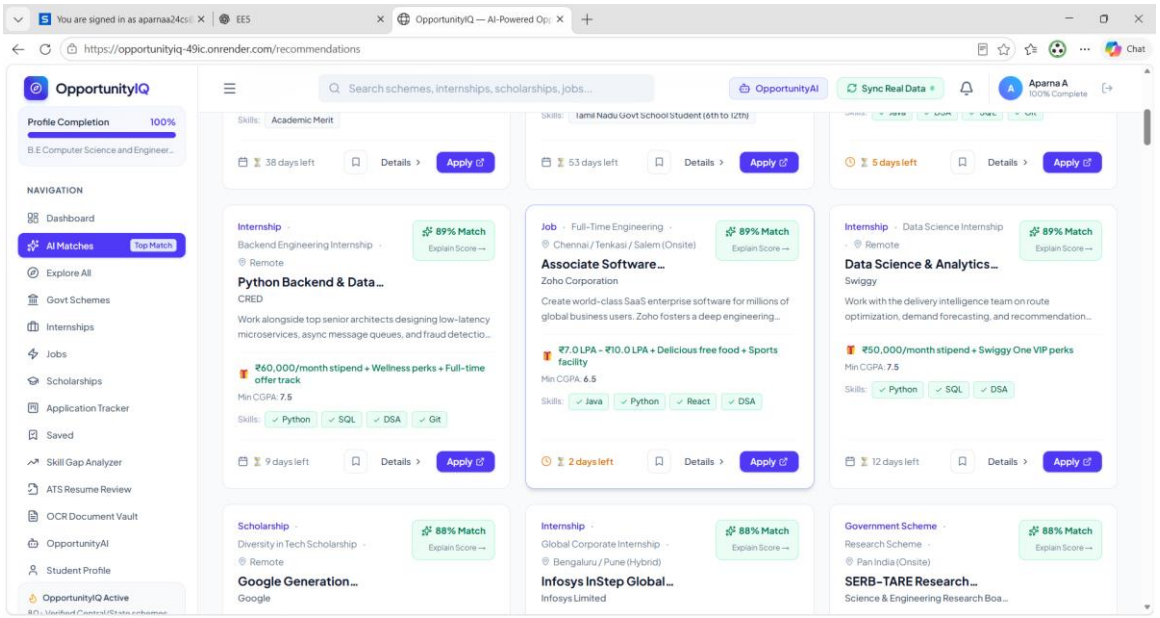


Figure 3. AI-matched scholarships, internships, and job opportunities.

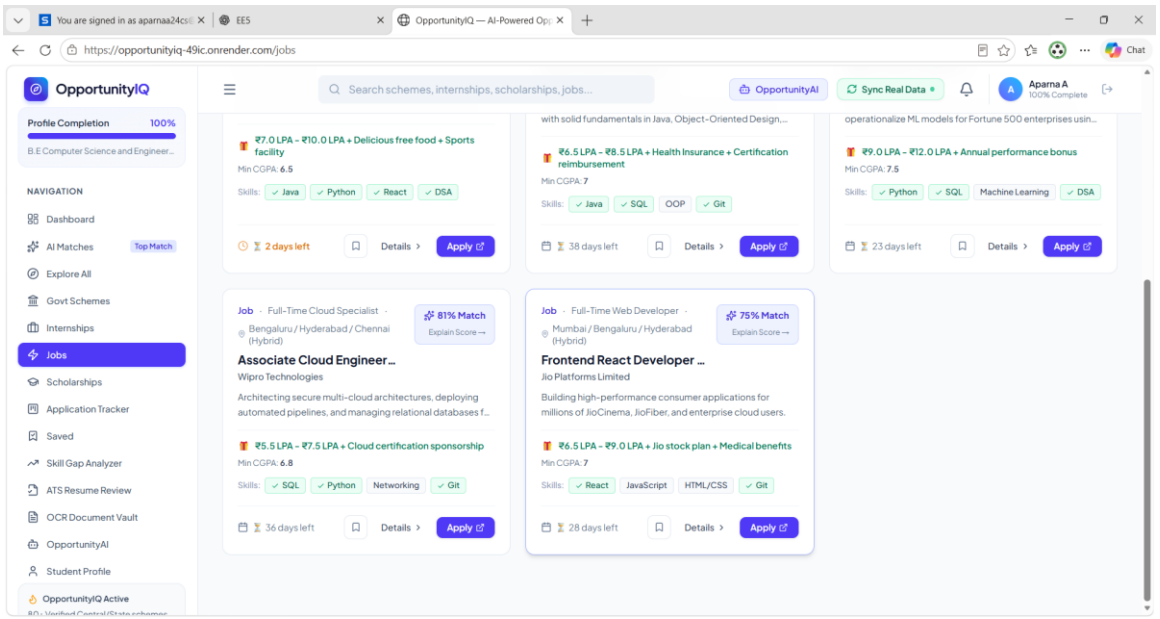


Figure 4. Job listings with match scores, skills, and application links.

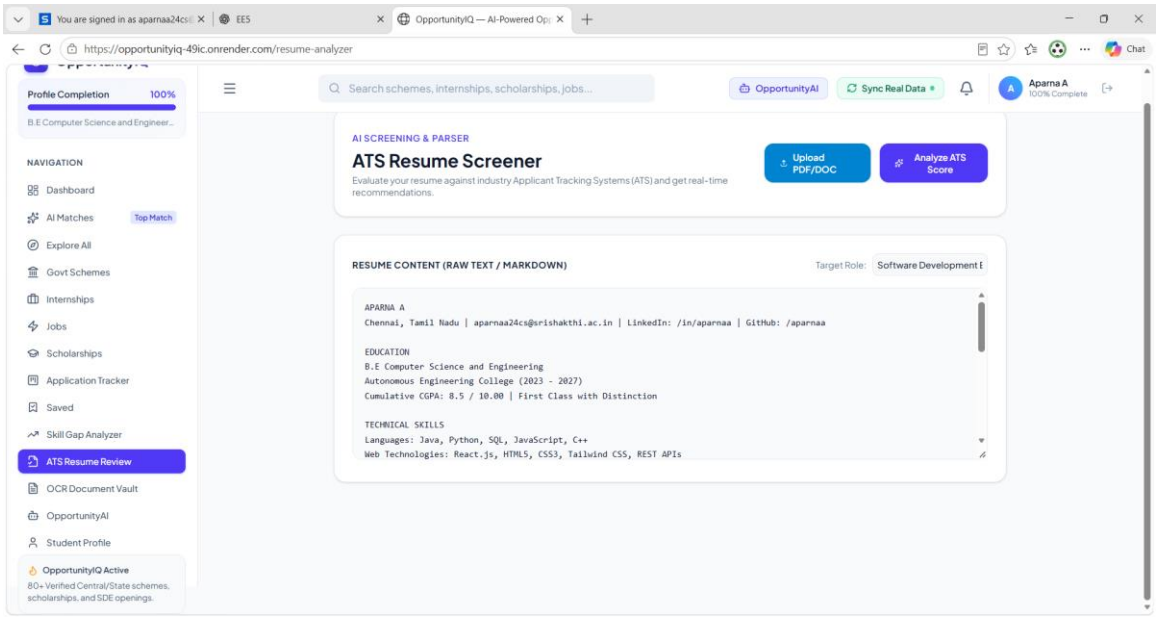


Figure 5. ATS Resume Screener interface.

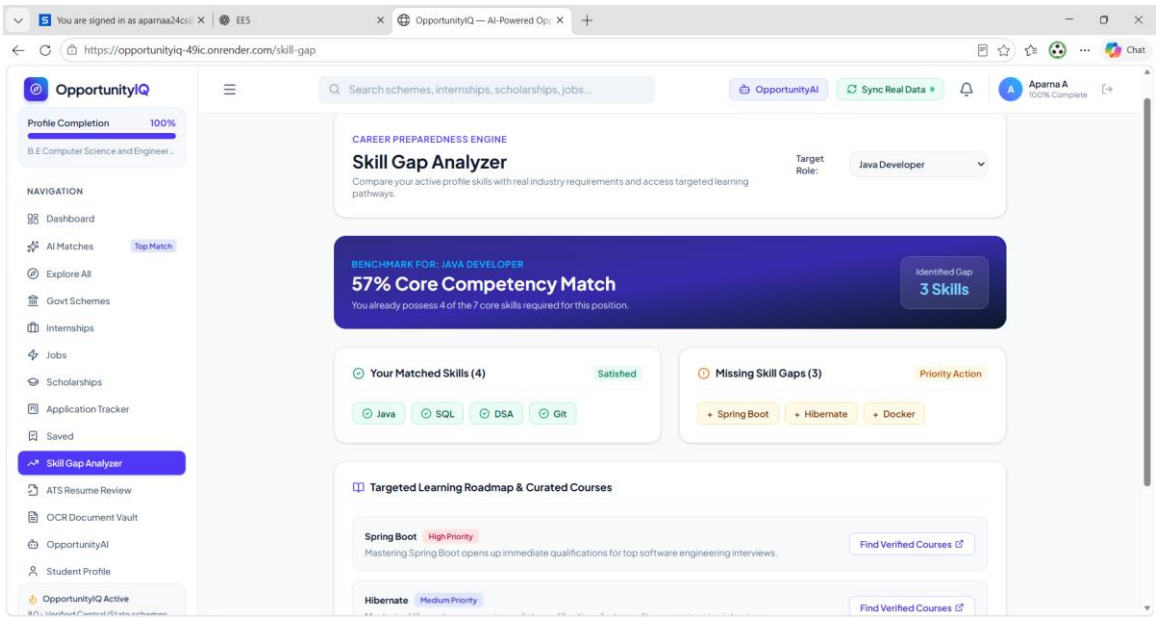


Figure 6. Skill Gap Analyzer showing matched skills and missing skills.

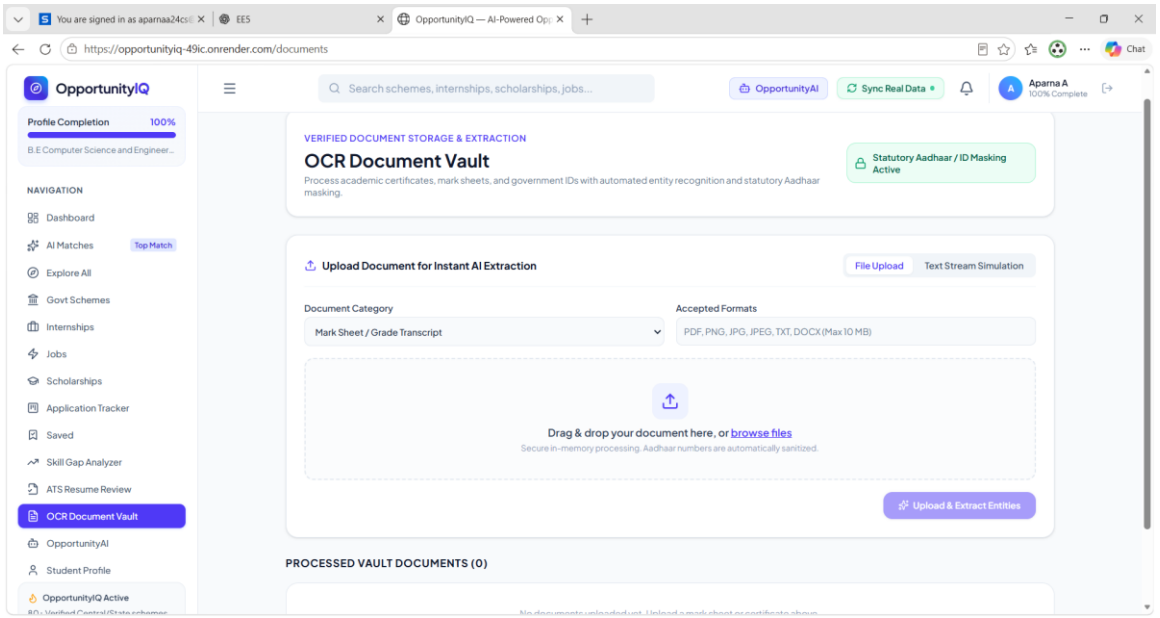


Figure 7. OCR Document Vault for document upload and extraction.

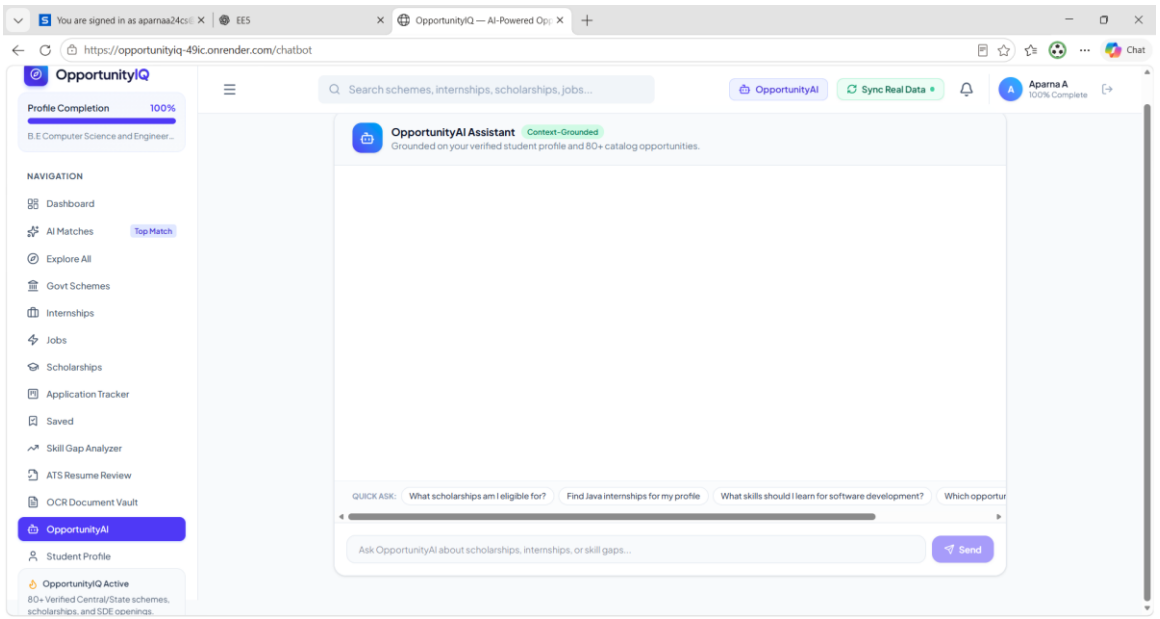


Figure 8. OpportunityAI conversational assistant interface.

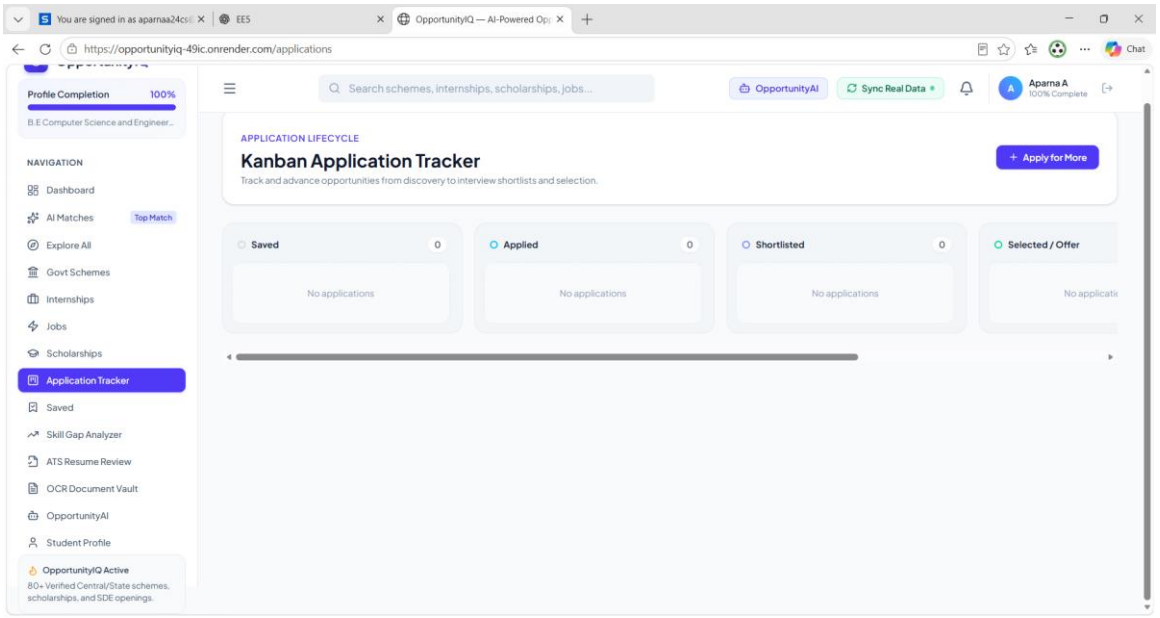


Figure 9. Kanban Application Tracker for application progress.

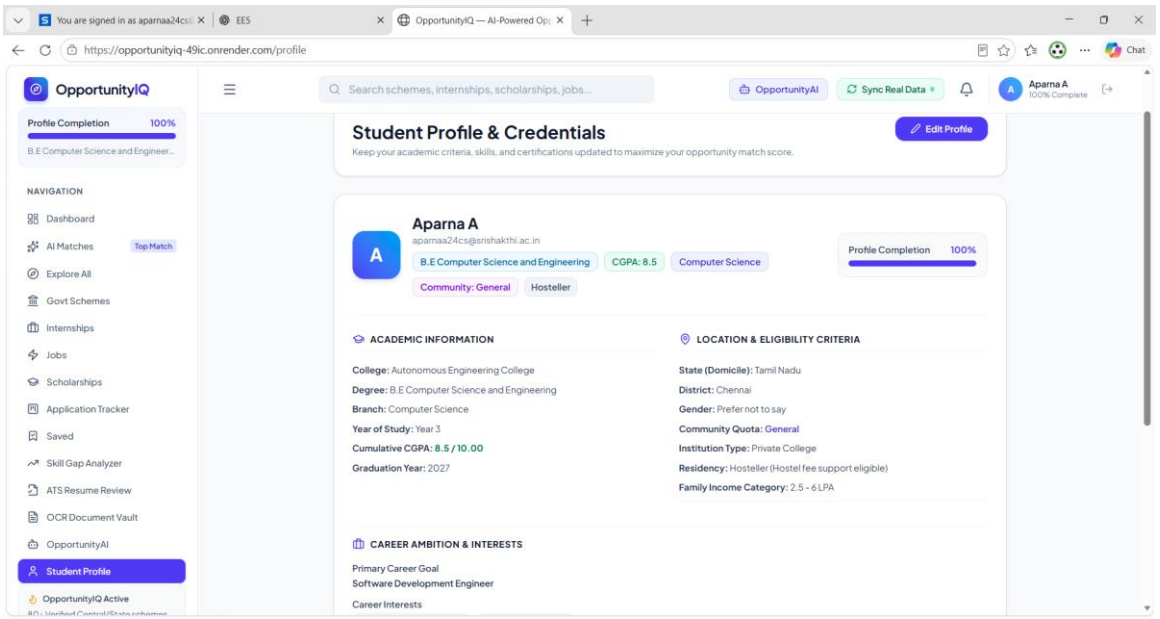


Figure 10. Student Profile and Credentials

CONCLUSION:

OpportunityIQ presents an AI-powered platform designed to simplify the process of discovering scholarships, internships, jobs, and other career opportunities for students. By integrating opportunity tracking, ATS resume screening, skill gap analysis, OCR-based document management, and an AI-powered career assistant, the system provides a centralized solution for academic and professional development. The student profile and dashboard help users organize their qualifications, monitor application progress, and understand areas that require improvement. By bringing these features together in a single web application, OpportunityIQ aims to reduce the effort involved in career preparation, improve access to relevant opportunities, and support informed decision-making. The platform can be further enhanced by integrating verified real-time opportunity data, personalized recommendations, deadline notifications, and additional career assessment features to provide students with a more effective and accessible career development experience.

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