Project Overview

**Project Title:**  
NWVIT Resume Compatibility & Feedback Tool (Open-Source ATS MVP)

**Objective:**  
The goal of this project is to develop a web-based tool that allows users to upload their resume and a job description, then receive a compatibility score and actionable feedback — simulating how a hiring manager or Applicant Tracking System (ATS) might evaluate their application.

**Purpose & Motivation:**  
This project is being created to support veterans transitioning into tech careers by giving them a competitive edge in the job search process. Many resume tools are either behind a paywall or too generic. This open-source tool will provide real-time, veteran-focused feedback to help job seekers improve their resumes and match their skills with employer needs.

**Who Benefits:**

* **Veteran Job Seekers**: Gain clarity on how well their resumes match job descriptions, empowering them to tailor applications and stand out.
* **Employers**: Gain more qualified, well-prepared candidates from one of the most resilient and capable talent pools — U.S. military veterans.

Stakeholders & Audience

**Primary Users:**

The tool is designed for NWVIT members — primarily U.S. military veterans — across a broad range of technical experience levels. This includes veterans who are brand new to the tech industry as well as seasoned professionals (up to CTO or CISO level). As such, the user experience must be intuitive, accessible, and clearly focused on delivering meaningful feedback without requiring deep technical knowledge.

Most users will be job seekers, but the tool should also serve NWVIT mentors and volunteers who may assist others in optimizing resumes and preparing for job applications.

**Internal Stakeholders:**

The initial development and planning will be led solely by Aaron Barkley. As the project matures, additional NWVIT board members, volunteers, or contributors may be invited to assist with testing, promotion, and ongoing maintenance. Once the tool is stable, ownership and administrative control will be formally transitioned to NWVIT leadership.

Although the project will be open-source, contributor attribution and project history will remain visible, preserving credit for original development efforts.

**User Roles & Access Levels:**

| **Role** | **Description** |
| --- | --- |
| **User** | Can upload a resume and job description, receive scoring and feedback. |
| **Admin** | Has visibility into usage analytics, common error patterns, and can manage system-wide settings or users. |
| **Reviewer** *(future)* | A potential future role for mentors or community members to view submissions and offer human-guided feedback. |

Deliverables (MVP Features)

**Minimum Viable Product (MVP)**

The following features will be delivered in the initial release of the NWVIT Resume Compatibility Tool:

1. **Resume & Job Description Input**
   * Users can upload a .pdf or .docx resume
   * Job descriptions can be pasted directly into a text field
   * All input is processed *in-session only*; no files or text are stored on the server
2. **Real-Time Parsing & Keyword Matching**
   * The tool extracts keywords from the job description and parses the resume into standard sections (Summary, Skills, Experience, Education)
   * Keyword matches are compared to determine overall alignment
3. **Compatibility Scoring Engine**
   * Generates a compatibility score (0–100) with a breakdown across:
     + Keyword match percentage
     + Presence of expected resume sections
     + Basic formatting cues (e.g., file type, use of headers)
   * Scoring is calculated entirely in memory and discarded after display
4. **Actionable Feedback**
   * Highlights improvement opportunities based on ATS best practices and common recruiter expectations
   * Feedback is provided on-the-fly and can be copied or downloaded by the user
5. **Simple, Intuitive UI**
   * Responsive design accessible via desktop and mobile devices
   * Branded or styled in alignment with NWVIT visual identity (if provided)
6. **No Data Storage**
   * No resume, job description, or scoring data will be saved to any persistent storage
   * User privacy and PII protection are prioritized at every level
7. **Optional Login System**
   * Authentication is optional and may be implemented for future features
   * No personal data (e.g., resumes or reports) will be tied to user accounts
8. **Admin Dashboard (Basic Metrics Only)**
   * Admins may access basic system metrics such as:
     + Number of scans
     + System uptime
     + Failed parse counts
   * No user-identifying data is stored or displayed
9. **Open Source Repository**
   * Full project codebase will be available on GitHub under a permissive license (MIT or similar)
   * Includes documentation, setup instructions, and contribution guidelines
10. **Dark Mode Support**

* The application will include a toggle (or auto-detect system theme) for dark mode
* Ensures accessibility and comfort for users who prefer reduced screen brightness

Timeline & Milestones (Sprints)

This project will follow a sprint-based development model, allowing for flexibility in scheduling while keeping a consistent focus on deliverables. Each sprint represents a focused work cycle, rather than a fixed weekly deadline.

**Sprint Plan**

| **Sprint** | **Milestone** | **Description** |
| --- | --- | --- |
| **Sprint 1** | 🔍 **Finalize Scope & Set Up Dev Environment** | Confirm project scope, select tech stack, create GitHub repository, and scaffold frontend/backend structure |
| **Sprint 2** | 📄 **Build Resume + JD Input UI & Parser** | Create UI for uploading resumes and pasting job descriptions. Integrate a resume parser and extract job-relevant keywords |
| **Sprint 3** | 📊 **Develop Scoring Engine + Feedback Generator** | Build logic for keyword matching, generate a compatibility score, and provide actionable resume feedback in-session |
| **Sprint 4** | 🖥️ **Frontend Polish + Dark Mode** | Implement clean, responsive UI with a dark mode toggle. Integrate backend scoring into frontend components |
| **Sprint 5** | 🛡️ **Security Pass + Admin View (No PII)** | Ensure zero data retention for resumes or job descriptions. Add admin view for anonymous usage metrics and system health tracking |
| **Sprint 6** | 🚀 **Deployment + Documentation + Board Demo Prep** | Deploy MVP to a hosting platform, finalize documentation, and prepare a board briefing package including a walkthrough demo, mockups, and high-level roadmap |

**NWVIT Board Demo (Sprint 6)**

A brief demo will be prepared to showcase:

* Tool functionality (live or screen-recorded)
* Visuals of resume analysis and feedback
* Summary of technical decisions, privacy protections, and future phases

The goal of the board briefing is to introduce the tool’s value, show early traction, and gather feedback before public rollout.

Licensing & Open Source

Licensing & Ownership:

This project will be released as an open-source tool under the MIT License, encouraging community use, contribution, and long-term growth. Attribution to the original developer, Aaron Barkley, will remain within the codebase and documentation.

NWVIT will retain operational control of the deployed tool once the MVP is delivered, while the source code will remain publicly accessible on GitHub. Contributions from the broader tech and veteran communities are welcome and encouraged through standard pull request workflows.