Project Name:

Attention Keeper

Project Sponsor:

DR. Al-Hassan Mohamed

Project Manager:

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Mariam Tarek Khalaf
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Date:

October 28, 2025

Project Purpose and Justification:

The purpose of this project is to develop an **Eye-Tracking Browser Extension** that monitors a user's eye movement while studying or watching videos. The system automatically pauses the video when the user's eyes move away from the screen, and when the user looks back, it rewinds the video by five seconds before resuming playback. This project aims to enhance focus, minimize distractions, and improve learning efficiency by ensuring continuous attention. It is involves developing a **browser extension** that uses **eye-tracking technology** to monitor user attention while studying or watching videos .

Project Objectives:

•Develop and deploy the eye-tracking browser extension by **April 15, 2026**

- Ensure compatibility with **all major browsers** (Chrome, Edge, Firefox, Safari)
- Improve user focus and reduce off-screen distraction time by **at least 70%**
- Maintain smooth video control with **less than 1% system error rate**

Scope Description:

- In Scope:

1. **Develop a browser extension** compatible with Chrome, Edge, and Firefox.
2. **Integrate eye-tracking functionality** using a standard webcam or existing libraries.
3. **Automatically detect eye movement** to pause or resume videos based on user gaze direction.
4. **Rewind the video automatically by five seconds** when the user returns to the screen.
5. **Develop a user interface for extension settings**
6. **Prepare technical documentation and a user manual.**

- Out of Scope:
  1. **Mobile application development or support for non-browser environments.**
  2. **Integration with closed or encrypted video streaming platforms (e.g., Netflix).**
  3. **Integration with Learning Management Systems (LMS) at this stage.**
  4. **Development of new AI algorithms for eye tracking (existing tools will be used).**

Deliverables:

- A fully **functional AI-powered eye-tracking browser** extension compatible with all major browsers (Chrome, Edge, Firefox, Safari)
- An **intuitive user interface for video control** and eye-tracking calibration
- **A machine learning** model for real-time eye movement detection and focus analysis • Documentation including installation guide, user manual, and technical report
- **Testing and performance reports demonstrating accuracy and reliability.**

Constraints:

- Must be delivered by April 15, 2026 (before the next academic year)
- Budget limited to EGP300,000
- The system must support **simultaneous usage by up to 1,000 active users** across different browsers

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Assumptions:

- Users will allow camera access for the eye-tracking feature.
- Browser APIs and major video platforms will remain compatible during development.
- Users' devices will have a working webcam and stable internet connection.

Exclusions:

- Feature enhancements after delivery require separate funding and approval
- Advanced analytics or emotion detection are excluded.

Acceptance Criteria:

- The extension passes user acceptance tests for all main functions.
- Eye-tracking works with at least 95% accuracy.
- Privacy and security measures are correctly implemented.
- User guide is reviewed and approved by the supervisor.

Stakeholders:

- Sponsor
- Project Manager
- IT Development Team
- Faculty and students (end users)
- University IT support staff

Approval:

- Project Sponsor: _____ Date: _____
- Project Manager: _____ Date: _____
