

CSC-1S004-EP – bxAI Report

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Abstract

This report presents the final deliverables for the bxAI website project. It provides an overview of the system's development, architectural decisions, and future prospects. Moreover, it further presents the HTML, CSS, and JavaScript components, while illustrating the most important code elements.

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1 Introduction

The bxAI website was developed as the official online presence of the bxAI (Artificial Intelligence) committee, offering information about the team, past and upcoming events, and contact opportunities.

Designed and implemented by the founding members, the site was built using standard front-end technologies, with an emphasis on modular design, visual consistency, and responsiveness across devices. All components of the website—HTML structure, CSS styling, and JavaScript functionality—were implemented entirely from scratch, without the use of external templates or design frameworks, to ensure originality and maintain full control over the codebase.

2 Methodology and Results

2.1 System Architecture

The website was designed as a static front-end using core web technologies: HTML, CSS, and JavaScript. Each major page is built as a dedicated HTML file with modular, component-specific CSS support. The HTML structure includes:

- **Home Page** (`index.html`) — introduces the bxAI mission, upcoming events, and team overview. It includes a live JavaScript countdown to the next event and an animated title section. Poster previews are displayed with clickable cards linking to detailed event pages - a 2-column view features the most recent event on the left side, and a scrolling list of all events (including the upcoming one).
- **Team Page** (`team.html`) — showcases the core members of the committee using a responsive CSS grid. Each member has a card with a photo, name, role, and an interactive hover effect that reveals a detailed biography and a direct link to their LinkedIn profile. Smooth CSS transitions and structured markup ensure accessibility and responsiveness.
- **Events Page** (`events.html`) — provides a gallery of past events, rendered as stylized cards. Each card includes an image, title, date, and summary, and links to a dedicated event detail page. The layout is mobile-friendly, using media queries and grid-based CSS.
- **Event Detail Pages** (`event-*.html`) — these pages offer a description of each event along with an image gallery. Each image opens in a modal lightbox with previous/next navigation using only HTML and CSS (IDs and `:target` selectors), creating a JavaScript-free interactive experience.
- **Contact Page** (`contact.html`) — embeds an interactive map using Leaflet.js, with custom markers for all team members' hometowns, as well as the bxAI headquarters at l'X, and a zoomable world view. The contact form is structured with semantic HTML5, styled for clarity, and opens an email draft via a `'mailto:'` action. Moreover, social media icons link to bxAI's Instagram and LinkedIn accounts.

2.2 Styling and Responsiveness

The styling is managed through several CSS files, each with a specific purpose:

- `style.css` — a shared stylesheet, defining core layout, colors, and typography, and containing reusable design tokens, navigation styles, and utility classes.
- `style_team.css` — defines the layout and hover interactions for the team member grid, including responsive design and bio card animations.
- `style_contact.css` — styles the contact page layout, including form inputs, submit buttons, and responsiveness of the Leaflet map container.
- `style_events.css` — used in the main events listing page, styling the grid of event cards with hover effects and responsive design.
- `style_event_page.css` — used in individual event pages, managing layout, text formatting, and lightbox-style modal image interactions.

2.3 JavaScript Functionality

JavaScript files are used to introduce dynamic interactivity to the website:

- `background.js` — creates an animated background made of a grid of cells, with some color pops.
- `header.js` — manages header visibility based on user scroll behavior. The header hides when scrolling down and reappears when scrolling up. It also controls the hamburger menu in mobile view.
- `numbers_animation.js` — animates numerical counters when the user scrolls to a specific section.
- `timer.js` — implements a real-time countdown to an upcoming event.
- `typing_animation.js` — creates a typewriter animation effect for subtitles on the homepage.
- `script_contact.js` — handles the interactive map feature using the Leaflet.js library. It creates the map centered on l’X and populates it with custom markers for each team member’s home city.

3 Future Prospects

The modular, scalable architecture allows new events and updates to be added quickly. Future enhancements we plan to implement include sending contact messages to a server, integrating a chatbot to answer questions, and automatically generating event pages on the server side from structured content (images and descriptions), using a predefined template. Additional improvements include attaching presentation slides to each event’s page, providing an AI resources page, and creating a feedback form.

References

- Leaflet.js — <https://leafletjs.com>
- HTML5/CSS3 MDN Docs — <https://developer.mozilla.org>