BuildMate: PC Assembly & Upgrade Experience

Build your dream PC with ease

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| **Course** | UX Design in Web & Mobile App | CSIS-3375-004 |
| **Team Lead** |  |  |

# Introduction

## Background

Building or updating a personal computer (PC) has always been thought of as a chore best left to enthusiasts and users with technical expertise. The demand for in-depth understanding of device compatibility, power requirements, and performance benchmarks makes the process daunting for many novices. Errors like selecting an inadequate power supply or an unsuitable motherboard may rapidly result in frustration and resource loss. The majority of current resources are still technical, text-heavy, and inaccessible to the typical user, despite the rising interest in custom PCs.

## Purpose of BuildMate

BuildMate provides an interactive, visually-first environment for PC building and upgrades in order to address these issues. A virtual builder allows users to drag and drop components while getting real-time compatibility checks, performance information, and suggestions for upgrades. To improve decision-making even further, the application models results like system efficiency, rendering speeds, or predicted game performance. Users may sample how various PC cases might appear in their workstation with BuildMate's augmented reality (AR) features. The building process becomes an interesting, simple, and instructive experience thanks to this mix of characteristics.

## Significance

BuildMate's importance comes from its capacity to make PC building more accessible. The application encourages curiosity and confidence in users while empowering them to make educated decisions by lowering the technological obstacles that deter novices. BuildMate offers a hands-on, interactive method similar to constructing with LEGO bricks, in contrast to conventional websites or applications that place an emphasis on particular requirements. This helps novice builders, but it also appeals to seasoned users who want performance-based decision-making, efficiency, and visibility. In the end, BuildMate reinvents PC construction as a life-changing activity centered on empowerment, knowledge, and accessibility.

### Motto: Assemble. Learn. Upgrade.

# Background Research

## Market Competitors

PC Part Picker

NZXT BLD

## Market Inspirations

# PACT Framework

## People

## Activities

## Context

## Technology

# Value Proposition

# Project Contract

We, the undersigned, agree to the following:

* Meetings: Twice a week (in person + online via Teams).
* Communication: WhatsApp for updates.
* Documentation: Shared Word Documents + GitHub Repo.
* Team Lead Role: Coordinates submissions, ensures deadlines, communicates with instructor.

Team Members’ Signatures:

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| --- | --- |
| Eranda Hettiarachchillage | Eranda |
| Roun Kitahara |  |

# Preliminary Features

The preliminary features of BuildMate outline the essential functionality envisioned for the prototype. These features focus on simplifying the PC building process, offering users both utility and creativity while providing opportunities for interactive engagement.

* Drag-and-drop PC component builder:

Enables users to assemble their custom PC virtually in an intuitive, visual way.

* Real-time compatibility checker:

Automatically identifies and alerts users of any mismatched or incompatible hardware components.

* Performance simulation:

Provides projections of gaming FPS, rendering speeds, and overall system performance.

* Upgrade recommendation engine:

Suggests optimal upgrades based on the user’s current build and performance goals.

* AR preview of PC case setup:

Let users virtually place their chosen PC case on their desk using augmented reality for spatial awareness.

* Community sharing:

Allows users to share, showcase, and compare their builds with friends or a wider community.

# AI Usage

This section outlines the AI tools used to support the development of the BuildMate prototype. It shows the specific purpose of each tool and highlights how the team added value beyond the AI outputs.

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| Tool Name | Version | Use Case |
| ChatGPT | Free | Brainstorming features |
| Figma AI Plugin | Free | Generating UI/UX design suggestions |
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# Work Date/Hours

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| Student: Eranda | | |
| Date | Number of Hours | Description |
| Sep 25, 2025 | 0.5 | Discuss project ideas with instructor |
| Sep 28, 2025 | 0.1 | Selected project idea with team |
| Nov 03, 2025 | 2 | Start writing project proposal |

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| --- | --- | --- |
| Student: Roun | | |
| Date | Number of Hours | Description |
| Sep 25, 2025 | 0.5 | Discuss project ideas with instructor |
| Sep 28, 2025 | 0.1 | Selected project idea with team |
| Nov 03, 2025 | 2 | Start writing project proposal |

# References