

FROM ENTERPRISE TO CLASSROOM: ENHANCING WEB DESIGN AND UI/UX CURRICULA THROUGH AI-DRIVEN WORKFLOWS AND TOOLS

Maya Stoeva

Abstract. *The rapid evolution of Artificial Intelligence (AI) has fundamentally altered the landscape of digital product development and design education. As industry standards shift toward accelerated delivery, automated documentation, and processes, a significant gap often emerges between professional workflows and academic instruction. This paper explores the strategic integration of AI-driven tools, including Gemini, Claude, ChatGPT, Copilot, and specialized platforms such as NotebookLM, Watsonx.ai, and IBM Bob, to align enterprise-level UI/UX practices with higher education curricula. The study presents a dual-perspective case analysis based on the author's experience as a lead product UI/UX Designer in a global technology company and a university lecturer. It details the practical application of AI for streamlining complex business research, rapid prototyping, and generating technical documentation, such as tickets and presentations. Subsequently, it demonstrates how these professional methodologies are adapted for teaching Web Design, QA, Software quality assurance, and Cybersecurity, using NotebookLM as a primary engine for synthesizing vast amounts of technical data into accessible learning modules.*

Preliminary findings suggest that AI integration significantly reduces the time spent on administrative and repetitive tasks (e.g., requirement gathering and initial wireframing), allowing both professionals and students to focus on high-level creative problem-solving and strategic design thinking. The use of Gemini and NotebookLM, in particular, proved pivotal in grounding AI-generated content in verified, domain-specific sources, thereby ensuring academic rigor and practical relevance.

The paper concludes that embedding industry-standard AI workflows into the classroom not only enhances student employability but also creates a scalable framework for continuous curriculum update in an AI-centric world. This study serves as the foundational entry in a series exploring the future of AI-augmented professional and pedagogical excellence.

Key words: UI/UX Design, AI-driven Workflows, Gemini, Copilot, NotebookLM, Design Education, Enterprise Research, Software Quality Assurance,

Higher Education Innovation

Maya Stoeva

Paisii Hilendarski University of Plovdiv,

Faculty of Mathematics and Informatics,

236 Bulgaria Blvd., 4027 Plovdiv, Bulgaria

Corresponding author: mstoeva@uni-plovdiv.bg