Bilge Kagan PAMUK

Virtual Reality Developer

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ABOUT ME

I am a 23-year-old software engineer with a strong foundation in the exciting and dynamic world of Virtual Reality (VR), Mixed Reality (MR), and Augmented Reality (AR). With two years of hands-on experience in this rapidly evolving field, I have had the opportunity to work on groundbreaking projects and contribute to the development of immersive experiences that redefine human-computer interaction. My deep commitment to research has allowed me to stay at the forefront of technological advancements in VR, MR, and AR, as I believe that research is the cornerstone of innovation. I have successfully completed three impactful projects in this domain, and I am continuously dedicated to expanding my knowledge and expertise, eager to shape the future of this immersive technology landscape

- Non-Smoker
- Need Sponsorship

EDUCATION

B.Sc., 2018 – 2023, Atilim University (TURKEY), Software Engineering

Atilim University is a distinguished institution known for its excellence in software engineering education and is highly regarded in the academic world. The university's exceptional quality in the field of software engineering is underscored by its consistently high ranking in prestigious global higher education assessments, including those conducted by THE (Times Higher Education). These rankings serve as a testament to Atilim University's commitment to delivering top-notch education and research opportunities in software engineering.

Erasmus, 2021 – 2022, Ostrava University (CZECH), Software Engineering

Participating in the Erasmus program has been a pivotal experience in my academic journey as a software engineer. During my time abroad, I had the invaluable opportunity to immerse myself in a different academic environment, exposing me to a diverse set of learning techniques and methodologies. This experience broadened my horizons and significantly enhanced my problem-solving skills, enabling me to approach software engineering challenges from multiple angles. Additionally, my time abroad allowed me to make significant strides in improving my English language proficiency. Effective communication is paramount in the field of software engineering, given its global and collaborative nature. The ability to articulate ideas, collaborate with international teams, and comprehend the latest research and developments in the field has been greatly facilitated by my enhanced English skills.

SKILLS

- **Virtual Reality:** Proficient in creating immersive virtual reality experiences using C# and Unity, with a strong understanding of VR principles, physics simulations, and user interactions. Experience in developing applications for various VR platforms, ensuring high-quality, immersive user experiences.

- **Augmented Reality:** Skilled in developing augmented reality applications using C# and Unity. Proficient in creating AR experiences that blend digital content with the real world, including marker-based and markerless tracking, spatial mapping, and interaction design. Demonstrated ability to create engaging AR applications for different industries and platforms.

- **Mixed Reality:** Experienced in developing mixed reality applications that seamlessly integrate virtual and real-world elements. Proficient in utilizing C# and Unity to create MR experiences, incorporating spatial understanding, hand tracking, and immersive user interactions. Adept at building MR applications for a range of devices and environments, bridging the gap between virtual and physical worlds.

- **Animation:** Skilled in using Unity for animation, creating dynamic and visually appealing animations for games and interactive experiences.

Work Experience

Virtual Reality Developer - MedeaSoft (MetaVerse Applications) (February 2023- still)

Position and Focus: As an AR/VR/MR developer and App developer my work has been centered around the creation of a metaverse customized specifically for the dentistry field.

Responsibilities: In this role, my primary responsibilities have included leveraging the capabilities of augmented reality (AR), virtual reality (VR), and mixed reality (MR) technologies to conceptualize, construct an all-encompassing virtual environment tailored to meet the unique requirements of dental professionals.

Crafting Immersive Environments: My work has entailed meticulously crafting these virtual environments to incorporate features aimed at enhancing the training and practice experience within the field of dentistry.

Haptic Feedback Integration: An integral part of my role has involved the seamless integration of haptic feedback devices. This integration ensures that users can experience a highly realistic sense of touch and interaction within the virtual dental world. This aspect has added a tactile and immersive dimension to the metaverse.

Jaw Movement and Advanced Dentistry Concepts: In addition, I've made significant contributions by addressing intricate topics in dentistry. Notably, I've undertaken the challenging task of simulating jaw movement within the virtual environment, a concept that holds paramount importance in dental practice. By accomplishing this, I've advanced the level of realism and practicality of the metaverse for dental professionals, facilitating more realistic training and interaction.

Multiplayer Functionality: Furthermore, I've successfully implemented multiplayer functionality utilizing PUN-2, facilitating collaborative and interactive experiences for multiple users. This feature has proven to be especially valuable for dental professionals, offering them opportunities for training, collaboration, and engagement in complex scenarios within the metaverse.

Virtual Reality Developer – Akgun Technology (MetaVerse Applications)

[Akgün Teknoloji (akgun.com.tr)](akgun.com.tr) **(May 2022 - February 2023)**

Position and Focus: In my role, I had the opportunity to develop an innovative mixed reality application specifically centered around DICOM (Digital Imaging and Communications in Medicine) standards. This application stands at the intersection of cutting-edge medical imaging technology, virtual reality (VR), and augmented reality (AR).

Development Innovation: The core of my work revolved around pioneering a novel approach to medical image analysis and interaction. By synergizing the capabilities of both VR and AR, the application introduces a paradigm shift in how medical professionals engage with and interpret medical images.

Transformation in Medical Imaging: The primary objective of this application was to completely transform the conventional practices employed by medical professionals for handling and studying medical images. It breaks free from the limitations of traditional 2D displays and static images, presenting a dynamic and immersive platform for medical imaging.

Immersive and Intuitive Experience: By combining the strengths of VR and AR, the application delivers a truly immersive experience. Medical professionals can delve into the world of medical images, exploring them from all angles and interacting with the data in real time. This level of immersion provides an intuitive and comprehensive means of understanding intricate medical information, ultimately leading to improved diagnostic accuracy and more effective treatment planning.

Potential Impact: The potential impact of this mixed reality DICOM application is nothing short of revolutionary. It doesn't just change the way medical professionals work with medical images; it has the power to revolutionize medical education, telemedicine, and collaborative diagnostic efforts. This experience underscores the potential of advanced technology to shape the future of healthcare and medical imaging.

Project Owner and Software Engineer – Atilim University (Virtual Education Environment)

ATILIM UNIVERSITY **(November 2022 - June 2023)**

Position and Focus: In a multifaceted role, I owned and led the development of a groundbreaking VR application tailored for neurosurgery education and training within the medical community.

Development and Realistic Simulations: As the chief developer, I spearheaded the creation of highly realistic simulations, meticulously crafting a wide array of brain surgeries. These simulations were designed to closely replicate real surgical scenarios, serving as a crucial tool for neurosurgeons at all levels of expertise.

Performance Tracking System: My responsibilities extended to implementing an effective performance tracking system. This feature allowed users to quantitatively measure their surgical performance and progress, providing invaluable insights into their skill development. As both the developer and project manager, I ensured the system was seamlessly integrated into the application's framework.

Collaboration and Content Maintenance: As the project manager, I actively fostered collaboration among surgical teams and healthcare professionals. My role included keeping the application's content in sync with the latest advancements in neurosurgery. This ensured that the application remained a current and indispensable resource for the medical community.

Impact and Recognition: This project held a profound impact in the medical field, particularly within hospitals. It became a cornerstone for the pre-education and practice of surgeon candidates, significantly enhancing their training and preparation. In recognition of its groundbreaking contributions, the project was awarded the distinction of being selected as the Best University Graduate Project in Turkey for the year 2023. This honor further underscores the project's transformative influence on medical education and surgical training, with far-reaching implications for improving patient outcomes.

ATILIM UNIVERSITY **(November 2022 - June 2023)**