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Nr. crt.	Titlu lucrare	Scurta descriere	Cerinte	Nivel (licenta/master)
1	Edge-Based Predictive Temperature Control for Optimal Sleep Quality	This project models an intelligent environmental control system deployed at the network edge to specifically manage bedroom temperature. The system will predictively adjust thermal conditions based on biometric feedback to improve residents' sleep quality and health.	Advanced knowledge of Control Engineering I & II, System Identification and System Theory. Previous experience in MATLAB and/or Python is mandatory. High independence required for research team collaboration; strict responsibility needed for handling non-public information.	BSc
2	Smart Indoor Air Quality Management via Fog Computing Architectures	Focuses on deploying a fog computing-based control system to process real-time air quality data (such as CO2 and particulate matter) near the collection source. The goal is to optimize building ventilation responsively to enhance overall respiratory health during sleep.	Advanced knowledge of Control Engineering I & II, System Identification and System Theory. Previous experience in MATLAB and/or Python is mandatory. High independence required for research team collaboration; strict responsibility needed for handling non-public information.	BSc
3	Edge-Driven Adaptive Lighting Systems for Circadian Rhythm Alignment	Develops an advanced control system running on edge devices to manage indoor lighting. The system will dynamically adjust light spectrum and intensity to support natural sleep-wake cycles and make building environments more responsive to residents' health needs.	Advanced knowledge of Control Engineering I & II, System Identification and System Theory. Previous experience in MATLAB and/or Python is mandatory. High independence required for research team collaboration; strict responsibility needed for handling non-public information.	BSc
4	Multi-Variable Environmental Control: Integrating Edge and Fog Architectures	Explores the concurrent management of temperature, light, and air quality by distributing intelligent control algorithms across both fog and edge computing nodes. This holistic approach aims to maximize building efficiency and improve residents' sleep environments.	Advanced knowledge of Control Engineering I & II, System Identification and System Theory. Previous experience in MATLAB and/or Python is mandatory. High independence required for research team collaboration; strict responsibility needed for handling non-public information.	BSc

5	Energy-Efficient Edge Computing Strategies for Residential Health Environments	Focuses on optimizing the computational load of environmental control systems at the network edge. The work balances the energy efficiency of the building with the maintenance of optimal environmental factors (temperature, light, air quality) required for high sleep quality.	Advanced knowledge of Control Engineering I & II, System Identification and System Theory. Previous experience in MATLAB and/or Python is mandatory. High independence required for research team collaboration; strict responsibility needed for handling non-public information.	BSc
6	Digital Twin Modeling for Healthcare Professionals' Sleep Analysis	Develops a tailored Digital Twin solution to analyze the fragmented sleep quality of shift workers in the healthcare sector. The model will use specific profession-based characteristics to simulate and recommend restorative sleep strategies.	Advanced knowledge of Control Engineering I & II, System Identification and System Theory. Previous experience in MATLAB and/or Python is mandatory. High independence required for research team collaboration; strict responsibility needed for handling non-public information.	BSc
7	Sedentary Workforce Sleep Quality: A Digital Twin Approach for IT Professionals	Focuses on building a Digital Twin model tailored to desk-based workers. The project analyzes how high screen time and sedentary profession-specific characteristics impact nocturnal sleep quality, using advanced data processing.	Advanced knowledge of Control Engineering I & II, System Identification and System Theory. Previous experience in MATLAB and/or Python is mandatory. High independence required for research team collaboration; strict responsibility needed for handling non-public information.	BSc
8	Biomechanical Stress and Sleep Recovery: Digital Twins for Industrial Workers	Utilizes image and data processing algorithms to create Digital Twins for individuals in heavy industry and construction. The solution will analyze how intense physical strain and profession-specific physical environments dictate sleep quality and recovery.	Advanced knowledge of Control Engineering I & II, System Identification and System Theory. Previous experience in MATLAB and/or Python is mandatory. High independence required for research team collaboration; strict responsibility needed for handling non-public information.	BSc
9	Circadian Disruption in Logistics: Digital Twin Sleep Analysis for Transport Operators	Develops a tailored Digital Twin designed around the irregular schedules of the modern logistics workforce. The solution analyzes sleep quality based on profession-specific traits like timezone shifts and extended driving hours.	Advanced knowledge of Control Engineering I & II, System Identification and System Theory. Previous experience in MATLAB and/or Python is mandatory. High independence required for research team collaboration; strict responsibility needed for handling non-public information.	BSc