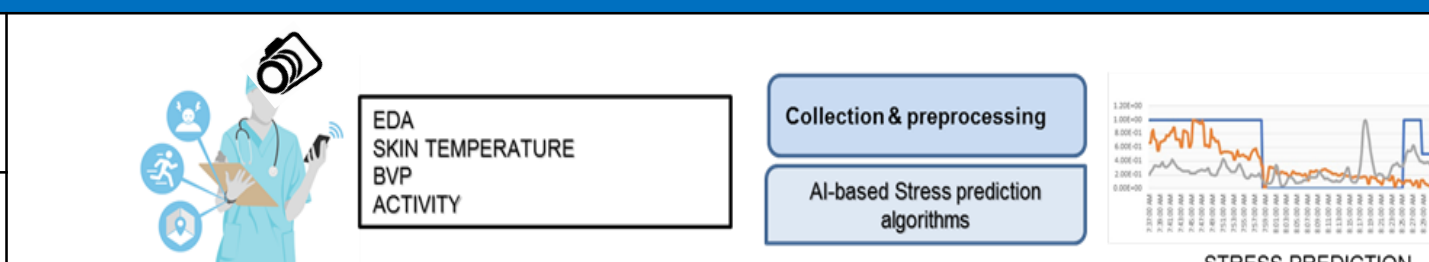
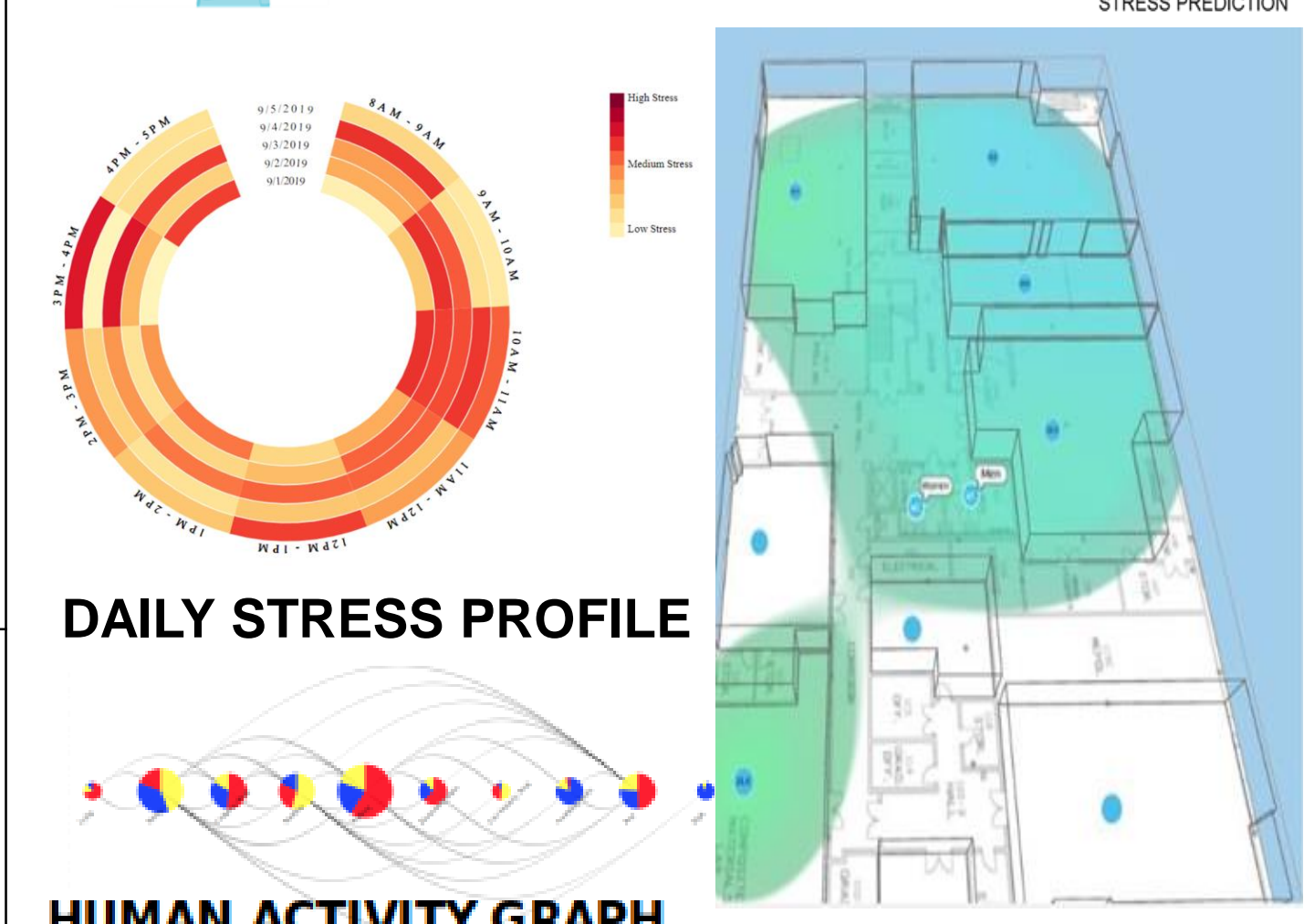


9a.008.UL_Privacy-aware Stress & Activity Recognition Using Wearables in Hospitals

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Project Start: 08/01/2020			End Date: 05/26/2020			Project Budget: \$50,000			Spent:\$15,000		
Project Summary: <ul style="list-style-type: none"> Prior work: <ul style="list-style-type: none"> Novel stress detection and visualization techniques Evaluated automated methods for stress detection for nurses in a real-world clinical setting Software for automated stress detection for nurses We plan to develop investigate stress detection techniques using multi-modal sensing (i.e. wearables, video and indoor positioning) <ul style="list-style-type: none"> Investigate methods to combine video and wearables for stress detection Investigate automated methods to extract context for stress detection Investigate privacy-aware machine learning techniques for stress detection 											
Details of Progress/Achievements: <ul style="list-style-type: none"> Improve stress detection performance (OGH Hospital) Privacy-preserving stress recognition and visualization in buildings Complete two studies on human subjects to evaluate stress-mitigation methods Activity detection using wearables 											
PROJECT DELIVERABLES											
Deliverable				Achievements				Remaining To Do			
<ul style="list-style-type: none"> 1. Study design for multi-modal sensing 2. Collect dataset from 8 to 10 subjects for evaluating stress in the context of multi-modal sensing 				<ul style="list-style-type: none"> Privacy-aware stress detection 				<ul style="list-style-type: none"> Activity-aware stress detection 			
<ul style="list-style-type: none"> 2. Software & algorithms for stress & happiness detection 											
<ul style="list-style-type: none"> 3. Multi-modal stress detection 								<ul style="list-style-type: none"> Create a data-set to validate stress using video and study the relationship between happiness and stress 			
<ul style="list-style-type: none"> 4. Study COVID and other contributors to stress 				<ul style="list-style-type: none"> The effect of COVID-19 outbreak on nurses' lives 				<ul style="list-style-type: none"> Study the effect of COVID-19 at different stages of the outbreak and peak clinical times 			