

Research Proposal

Title: Design Robust Authentication and Real time Threat Detection for Wearable Biomedical Device of Cybersecurity

Abstract:

Wearable biomedical devices have become a revolutionary technology in today's healthcare, providing continuous health surveillance, early disease diagnosis and real time feedback to patients. These devices are built to collect and transmit private health information (PHI) including heart rates, blood oxygen, glucose results and ECGs. Although such advancements are beneficial in terms of patient care and workflow, they introduce substantial cybersecurity threats. Attacks against wearable health devices could result as unauthorized access, data alteration or falsification of health readings, threatening patient safety as well as privacy.

In this work we cope with both the security challenges for the robust authentication and real time threat deduction in wearable biomedical systems toward continuous secure health monitoring.

Index Terms – Robust Authentication, Health Data Privacy, Real-Time Threat Deduction, Edge Computing, Continuous Health Monitoring, Biometric Security