Recent Research in Software Security, Privacy, & Policy in Healthcare: What it Means for SW Florida

Jeremy C. Maxwell

Security Test Architect, Allscripts Healthcare Solutions

PhD Candidate, North Carolina State University

Abstract. In February 2009, Congress passed the American Recovery and Reinvestment Act, making 22 billion dollars available to healthcare providers who adopt electronic health record (EHR) solutions. This stimulus is leading to one of the quickest transformation of any industry in the history of the United States, as thousands of healthcare providers are transitioning from paper records to electronic systems. Along with this transformation, healthcare IT is rapidly becoming a highly regulated domain, with privacy and security regulations such as HIPAA, DEA controlled substance, and Meaningful Use. These regulations are ambiguous and written by lawyers for lawyers, leaving software engineers out of the loop. Furthermore, the costs of noncompliance are significant—from failing to be first to market to regulatory penalties—but compliance is challenging.

In this talk, I will describe recent efforts to address these challenges, and what software engineers can do to codify ambiguity and specify compliance requirements to demonstrate due diligence. In addition, we will examine security best practices in other industries, such as the Payment Card Industry (PCI), to define prescriptive guidance for software engineers developing healthcare IT systems. I will conclude with how this research can be applied to meet challenges facing Southwest Florida.

Speaker's Bio. Jeremy Maxwell is a PhD Candidate in Computer Science at North Carolina State University. His research focuses on regulatory compliance in healthcare IT, including legal text modeling, cross-reference analysis, and legal text evolution. In addition, he works as the Security Test Architect at Allscripts Healthcare Solutions, a leading provider of healthcare IT solutions serving 180,000 physicians, 1,500 hospitals, and 10,000 post-acute organizations. He provides oversight of the common security framework and compliance with relevant security & privacy regulations, as well as drives the security software development lifecycle (SDLC) and security testing initiatives. Jeremy is a Florida Gulf Coast University alumn, graduating in 2007 with a B.S. in Computer Science.