CyberPaths*

Conference Workshop

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The goal of the project CyberPaths is the diversification and broadening of the STEM talent pipeline in cybersecurity in predominantly undergraduate and liberal arts schools. This is achieved by the creation of a curriculum that accommodates students of different levels of computer literacy with focus on experiential learning. This project mitigates the challenges undergraduate institutions currently face in the cybersecurity area, for example, a tight computer science curriculum and the inability to support the expensive infrastructure required for cybersecurity education. To address these challenges, first, we attract a diverse population of students by introducing cybersecurity topics through multiple paths of study and engagement. Students will be introduced to cybersecurity concepts through stand-alone course modules and laboratory exercises injected in general education liberal arts courses. Interested students can study further by taking two cybersecurity focused courses and cybersecurity capstone projects created by this project. Second, we use the Global Environment for Network Innovation (GENI) infrastructure in the development of hands-on labs and the capstone project assignments. GENI offers an affordable cloud solution to undergraduate institutions that lack the infrastructure to support high overhead computer labs. In this talk, I will present the CyberPaths project and briefly introduce the GENI labs and general education modules that we have developed. Then we will complete a couple of short GENI labs, starting from "Hello GENI" and moving to a simple "Denial of Service lab".