NSF Research Experiences for Undergraduates (REU)
CyberAI: Cybersecurity Solutions Leveraging Artificial Intelligence for Smart Systems May 20 –July 26, 2024

This Summer Research Experience for Undergraduates (REU) site, funded by NSF Division of Computer and Network Systems, focuses on cybersecurity challenges in future smart systems such as smart power grid, smart healthcare, internet of things (IoT), etc.

Project Objectives
- Opportunities to conduct cybersecurity-related research and gain valuable experience in topics of national interest.
- Allow interns to self-assess their interest in cybersecurity and graduate studies.
- Learn advanced subjects such as machine learning, cryptography, deep learning, federated and reinforcement learning, graph-based anomaly detection, and hardware attack countermeasures.

Topic Areas
- Secure AI-assisted Medical Diagnosis for Smart Healthcare Systems
- Secure Communication Schemes for Smart Power Grid
- Hardware Intrinsic Security Threats in IoTs
- Security Vulnerabilities in Machine Learning models
- Anomaly Detection using Graph Streams to Protect Cyber Networks
- Leveraging the Power of Data to Analyze and Detect Cyberattacks on IoT Systems

Eligibility
- U.S. citizen or permanent resident
- Electrical engineering, computer/software engineering, computer science or any other related disciplines.
- Must graduate after September 2024

Application Process
- Transcripts
- Two recommendation letters
- Personal statement
- Resume

Application Deadline
Screening will begin immediately and continue until all slots are filled.

Activities
- Cybersecurity-related research and short courses
- Short course on Deep Learning Deployment in Hardware
- Preparation of research papers and posters
- Hands-on training with real equipment
- GRE and NSF GRFP preparation

Applications Available Online
https://etap.nsf.gov/award/6635/opportunity/9077

All qualified applicants are encouraged to apply, including minorities, women, veterans and individuals with disabilities.

Award Information
- $7,000 stipend for 10 weeks
- On-campus housing included
- Food allowance
- Round-trip travel expenses up to $600
- The total is approximately $10,500

Announcement of Awards
April 20, 2024

All REU interns living on campus who are under 22 years of age must show proof of adequate immunization against Meningococcal Disease (Meningitis) on or after 16th birthday.

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