West Virginia University

The Advanced Engineering Research (AER) building houses the Lane Department of Computer Science & Electrical Engineering and many of WVU's Cyber programs

West Virginia University has been an active participant in the CAE program since 2006, and currently holds both the CAE-CDE (4 year institution) and CAE-R designations. The primary curriculum program path for the program is through the Lane Department of Computer Science & Electrical Engineering (LCSEE) in the Statler College of Engineering & Mineral Resources. Students may pursue studies in the Cyber field through undergraduate majors in Biometric Systems, Computer Science or Computer Engineering, or through graduate majors in Computer Science. In 2018, we had 38 undergraduates and 52 graduates pursuing studies in this CAE area, including 13 students who completed the BS Biometric Systems degree and 34 students who completed their MS Computer Science degree.

During the past year, WVU has approved two new degree programs focusing on cybersecurity. The Department of Management Information Systems in the Chambers College of Business & Economics will be offering a new MS degree program in Business Cybersecurity, and the LCSEE department will be offering a new BS degree program in Cybersecurity. The BS Cybersecurity degree program has been designed specifically to map the CAE Knowledge Units and the NIST framework. Both degree programs began accepting students in Fall 2018.

WVU has an active research program in the field of cybersecurity, with multiple research projects externally sponsored by the National Science Foundation, the US Department of Justice, and from private industry. Research activities in the fields of biometrics, malware detection, and digital forensics are nationally recognized. WVU Faculty Member Yanfang (Fanny) Ye and her students received the Best Paper Award from the 2017 ACM International Conference on Knowledge Discovery and Data Mining (ACM SIGKDD) for their paper "HinDroid: An Intelligent Android Malware Detection System Based on Structured Heterogeneous Information Network" which demonstrated how machine learning techniques could significantly improve malware detection on Android Devices.

DESIGNATIONS

• CAE – Cyber Defense Education
• CAE – Cyber Defense Research

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Dr. Yanfang (Fanny) Ye and her students pursue research in using machine learning techniques