



Course resumes showcase the technical skills students obtain in each PLTW course. Each resume outlines the computational skills, analytical skills, and knowledge acquired in the course. Course resumes also detail student experience with tools, software, lab work, and engineering design. The detailed skills listed within course resumes illustrate the immediate, applicable contributions that students can make within a workplace.

### **Information Security**

- Evaluate and define information security needs
- Authenticate and authorize access to information
- Organize and protect information stored in a file system

### **Security Algorithms**

- Analyze and improve cryptography algorithms
- Apply various encryption measures to secure information

### **Data Abstraction**

- Analyze network traffic at varying levels of abstraction
- Recognize patterns in traffic flow to identify cybersecurity events
- Recognize signatures and symptoms of malware to identify an attack

### **Computer Systems and Networks**

- Manage operating system resources necessary for network configuration
- Implement protection measures to secure computers and devices on a network
- Monitor network activity and traffic flow

### **Threat Investigation**

- Analyze the evidence of a cybersecurity event
- Identify system vulnerabilities that permitted an attack and the user actions that can secure the system
- Know and use investigative techniques of digital forensics

### **Industry Standard Tools**

- Virtual machines with a variety of configurations
- Network visualization and topology tools
- Penetration testing software
- Packet analysis software

### **Professional Skills**

- Ethical Hacking
- Collaboration in Cyber Teams
- Agile Project Development/Scrum
- Teamwork and Collaboration
- Presentation/Communication
- Public Speaking
- Ethics
- Cybersecurity Best Practices