

**ITP 270 – Programming For Cybersecurity**  
**Project 4 – Client-Server Data Exfiltration**

Assignment Date:               Week 12  
Deliverables Due Date:       Week 16

**Learning Objectives:**

- Understand how to implement client/server applications in python
- Employ the **socket** library to implement client/server applications
- Employ the **threading** library to create multi-threaded applications
- Understand how to create a client/server protocol
- Use the **json** library to create and manipulate JSON strings
- Use JSON to pass commands/messages between client/server applications
- Use the **os** library to obtain data about the host operating system
- Employ regular expressions in search operations

**Tasks:**

- Using the client/server framework code provided, modify both the server and client to implement the following functionality:
  - Send commands from the client to the server
  - Commands should include:
    - Scan attached disks for files based on search criteria
    - Request and download file based on name or other criteria
    - Query server's host for OS and supported python version

**Deliverables:**

- Working program. Demo in class.