

Jacob Kirk

386-295-5977

kirkjcs@gmail.com

linkedin.com/kirkjcs

github.com/riverext

Education

University of Central Florida <i>Bachelor of Science in Computer Science, Minor in Math</i>	Expected 2027 Orlando, FL
Seminole State College <i>Dual Enrolled in Computer Programming and Analysis</i>	2022-2023 Sanford, FL

Projects

NetTrace - Real-Time Network Intelligence Tool Personal Project
<ul style="list-style-type: none">Developed a real-time traceroute analyzer (Flask + Scapy + SSE) performing TCP/ICMP/UDP probing, RTT measurement, and hop enumeration.Integrated reverse DNS, geolocation, WHOIS/ASN, ISP attribution, and device/role classification to profile each hop.Built an interactive Leaflet UI that maps each hop globally, visualizes paths, and displays live metadata for security analysis and network exposure assessment.
PL/0 Compiler & Virtual Machine Academic Project
<ul style="list-style-type: none">Created a compiler and VM environment in C that mimics low-level program execution, allowing analysis of program memory layout and control-flow.Implemented a recursive-descent parser, symbol table, and stack-based VM to understand buffer behavior, frame pointers, and call-stack execution.Strengthened ability to spot potential miscompilation, memory misuse, and undefined-behavior vulnerabilities.
Face Recognition with PCA & CRC Academic Project
<ul style="list-style-type: none">Implemented PCA for dimensionality reduction and analyzed how data compression impacts model robustness and adversarial sensitivity.Used CRC classification to evaluate accuracy, error rates, and reliability under varied feature extraction pipelines.
Breast Cancer Classifier (Logistic Regression) Academic Project
<ul style="list-style-type: none">Built a logistic regression model with L2 regularization, reinforcing understanding of model explainability, bias, and reliability.Performed validation and testing with security-minded rigor, including input sanitization, dataset integrity checks, and metric-based evaluation.

Work Experience

Facilities / Maintenance Engineer <i>Dillards, Inc. (Part-Time)</i>	May 2023 - Current Orlando, FL
<ul style="list-style-type: none">Troubleshoot and repair store facilities (HVAC, lighting, plumbing, displays) to ensure safe operations.Developed strong problem-solving and hands-on technical skills under time constraints.Collaborate with store management to minimize downtime and improve efficiency.	
Construction & Maintenance Assistant <i>ARS Construction & Maintenance Co, Inc. (Part-Time)</i>	
<ul style="list-style-type: none">Supported commercial construction/repair projects at Amazon distribution centers, Nike, and retail clients.Assisted in electrical, carpentry, and general maintenance tasks in high-demand environmentsLearned adaptability and teamwork in large-scale, contract-based projects whilst adhering to budgets.	2023 - Current Longwood, FL

Technical Skills

Languages: C, C++, Python, Java, Bash, JavaScript

Tools: Linux, Git/GitHub, Flask, Scapy, Wireshark, VS Code

Technical Areas: Systems Programming, Networking, Operating Systems, Data Structures

Security Skills: Network Analysis, Log Review, Vulnerability Concepts (TestOut CyberDefense Pro)