Archit Goyal

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EDUCATION

Texas A&M University Bachelor of Science, Computer Engineering August 2022 - May 2026
GPA: 3.74 out of 4.0
Relevant Courses: Cybersecurity Law and Policy, Data Structures and Algorithms, Computer Architecture, Digital Systems Design, Program Design and Concepts, Electrical Circuit Theory, Signals and Systems, Differential Equations, Linear Algebra, Engineering Computation

WORK EXPERIENCE

Verizon – Network Automation Engineering Intern; Dallas, Texas Summer 2024

- Configured security testing in over 160+ repositories through Fortify Static Code Analyzer to ensure software reliability and security compliance
- Achieved a time efficiency of 70% by automating static application security testing via Red Hat Ansible guaranteeing consistent security layering
- Conducted penetration testing on web applications through Zed Attack Proxy identifying security vulnerabilities and enhancing system integrity
- Orchestrated workshops for 350+ attendees with hands-on training to facilitate implementation and adoption of new technologies across teams
- Leveraged knowledge in ISO-27001 and NIST frameworks to assess risk, develop security policies, and grow compliance across departments
- Developed comprehensive technical documentation to provide guidance to external teams, allowing accurate replication and increased efficiency

ACADEMIC RESEARCH

Texas A&M Cybersecurity Center – Lead Undergraduate Research Assistant; College Station, Texas Fall 2023 - Present

- Threat Hunting for malware using tactics, techniques, and procedures (TTPs) outlined in MITRE ATT&CK to enhance threat intelligence
- Training deep and recurrent neural networks to adapt to evolving malware tactics and techniques, ensuring effectiveness in threat detection
- Conducting comparative analysis of various ML algorithms via F1 score evaluation to identify the most effective malware detection techniques
- Clustering malware via feature tagging to reduce the complexity and redundancy of malware datasets by identifying patterns and variants

Maestro Laboratory – Undergraduate Research Assistant; College Station, Texas Fall 2022 - Spring 2024

- Designed a fork to foster ecological engineering projects and research organic alternatives in 3D-Printing through Finite Element Analysis
- Attained a 200% increase in process efficiency through the automation of modeling and meshing in Abaqus CAE using python scripting
- Optimized quantities such as the surface area to volume ratio in order to promote biodegradation through DEAP and SciPy algorithms
- Conducted 30+ test models to assess the strengths and weaknesses of the product design through fracture testing and statistical analysis

PROJECTS

Hack the Box – Online Platform Fall 2023

- Successfully completed multiple Hack the Box (HTB) machines and learning paths, progressing from easy to medium difficulty levels
- Mastered basic enumeration and penetration testing techniques such as port scanning, service identification, and directory brute-forcing
- Gained hands-on experience with exploit frameworks like Metasploit and vulnerability research tools like Nmap, Burp Suite, and HashCat

Traffic Light Controller – Verilog & Field Programmable Gate Array (FPGA) Fall 2023

- Created a state diagram and corresponding behavioral Verilog code for a FSM, incorporating delays and output signals for each road(state)
- Enhanced traffic flow by dynamically allocating green lights, minimizing unnecessary wait times for vehicles on both roads via sensors
- Programmed the ZYBO Z7-10 board with the Finite State Machine (FSM) design, verifying proper operation through LEDs and timers

Dungeon Crawler Game – C++ Fall 2023

- Designed a game through dynamic 2D array structures involving monsters, treasures, weapons, and objects that could modify the map
- Implemented player movement and interaction logic through user input & object-oriented programming to define player-map interactions
- Built a rudimentary monster AI system featuring pathfinding algorithms and obstacle traversal that attacks any player in its line of sight

TEAMS AND ORGANIZATIONS

Cybersecurity Club – Member; College Station, TX Fall 2023 – Present

- Developing practical cybersecurity and collaborative skills to incident response strategies for security breaches through club wide CTFs
- Practicing offensive hacking techniques and algorithms in order to prepare for real-life scenarios through Hack-the-Box/TryHackMe
- Learning Linux fundamentals and applications in order to apply to a variety of operating systems through club and online resources

TAMU Rocket Engine Design Team – Injection Engineer; College Station, Texas Spring 2023 - Spring 2024

- Improved thermal and structural efficiency of the injector plate to gain more control over combustion and injection using seals and gaskets
- Designed a program to calculate optimized values for the discharge coefficients and pressure drops using python optimization packages
- Minimized design risks to streamline the build process of the rocket through constant updates to the Standard Operating Procedure(SOP)

SKILLS

Technical Skills: Python, C/C++, Java, Verilog, Red Hat Ansible, FPGA, Git, Penetration Testing, Malware Analysis, Git Bash, Jenkins, Ubuntu
Other Skills: Agile Project Management, Cybersecurity Compliance, Microsoft Office Suite, Google Workspace, Team Player, Quick-learner
Interests: Cybersecurity, Automation, Machine Learning, Aviation, Music, Cricket, Coffee Connoisseur, Travel and Exploration, Cooking