

Anthony Carthen	E: anthonycarthen7@gmail.com	C: 2022306209	Website: Toolkit Engineering LinkedIn: Anthony Carthen
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EDUCATION

Bachelor of Science, Electrical & Computer Engineering, North Carolina Agricultural & Technical State University (2020) - ABET Accredited

ELECTRICAL & TECHNICAL SKILLS

AutoCad	Developer	Linux, Mac, Win	PLC CAD	Control Logic	Assembly Logic	Electronic Systems	Automation	Office 365
FPGA Assembly	Programming	Scripting	Microcontrollers	Python 3.11	C++	Cloud Computing	EPR/EDR	Analog Systems
Ladder Logic	Control Systems	Program Test/ Deb.	Prog. Logic Controllers	Javascript	Github Technologies	Networking	HTML, CSS	Circuit Design
Power Electronics	Circuit Analysis	SPICE/ Matlab	Maching Learning	SQL, NoSQL, MongoDB	.Net framework	Technical Writing	AI/Machine Learning	Math Analysis

Skills

Proficient in academic coursework related to electrical engineering, computer science, including principles of power systems, schematic design and telecommunications. Strong analytical skills with the ability to conduct assessments of power requirements and capacity planning. Detail-oriented with the capability to perform thorough evaluations of critical power equipment and troubleshoot issues effectively. Effective communicator and team player, able to collaborate with cross-functional teams to coordinate project activities. Skilled in documentation management and providing technical support to team members as needed.

Personal Engagements

- Studying for COMPTIA Security+ reading course textbook, researching security breaches and how each unique situation would be solved. Works on networking fundamentals using HackTheBox, view network packets investigating home network traffic anomalies.
- P2V converted Dell Optiplex3040 from Windows to Parrot OS, Debian dist. 2/12/2023
- Use PLCAcademy blog forum and website to engage in engineering think tanks, staying up to date with IEC standards, technologies and tools. 10/02/2024
- Participate with HacktheBox to work on networking fundamentals and system hardening, also working on creating honeypots, creating webscraping bots for blog content and research topics.
- Created a digital notepad in python using local database for job/recruiter tracking, scaled down to on on-prem application for the command line.
- Created a gnat, mosquito frequency attractor, plug-in to deter entry into residence using electronic parts from mouser. 05/11/2024

*Toolkit Engineering Website – Developer | UX Designer 3/17/2024 -present

- Toolkit Engineering, a personal front-end website coded/developed after graduation to maintain contact with current and future engineers to sharpen skills.
 - Front End: Angular JS, HTML5, CSS
 - Back End: MongoDB, Git, SQL
 - Linux Parrot OS Debian Dist.
- Use GitHub CI/CD pipeline to automate the process of building testing and deploying code changes to website.
- Manage web content, pages, and layouts using .NET framework to re-platform content management features

PROFESSIONAL EXPERIENCE

Technology Consultant II Networking Systems Delivery & Patching Allstate (Full-time)	1/14/2022 – 4/29/2023
<ul style="list-style-type: none">Build and maintain IT posture as it relates to micro-services, policies, firewalls, network traffic and server patches.Performed break/fix tasks on servers, packages, and other components, while minimizing downtime and maintaining high availability.Ensure operational standards were communicated across department by analyzing vulnerability scans in servers.Use playbooks from NIST Cybersecurity framework to investigate and solve network issues.Monitor website traffic metrics such as page views, unique visitors, and session durations.Deployed patches to Windows Servers using SCCM and Power Shell for enhanced system security.Led efforts to create a dynamic script to automate disk clean up and patch schedule.Optimize network traffic by ensuring proper firewalls allow communication.Engaged in scripting tasks using Power Shell and Shell (Linux) to automate routine system admin tasks such as kernel updates, disk cleanups and firewall/port management across 7000 server network.Collaborated with cross-functional teams in tutorials to assist with major enterprise incidents and build web applications, re-configuring the reporting tools pipeline, from cascading application servers, to feed directly to Service Now servers.Assist in the creation and execution of a robust test suite, significantly enhancing software quality by ensuring extensive test coverage.	

- Identify and suggest necessary solutions or process changes to improve efficiency.

Network Engineer I | Networking & Endpoint Security | Allstate | (*Full-time*)

6/14/2020- 1/14/2022

- Ensured the health and security of an extensive infrastructure by monitoring the vitals of 8,000 machines using advanced antivirus tools.
- Assist in hosting critical applications and sensitive data requiring high levels of control and security.
- Participated in capacity planning activities to prepare hybrid deployments, to meet regulatory compliance requirements, migration of workloads to on-prem.
- Inspect data traffic using network analysis tool, tcpdump & Wire Shark for real-time analysis of network.
- Proactively evaluated, troubleshoot, and escalated incidents related to application connectivity to minimize disruptions and swiftly resolve issues.
- Implemented Network hardening measures reducing unauthorized access incidents by 73%, using CrowdStrike, providing end-to-end email encryption.
- Review access permissions for groups implement least privileged access.
- Performed essential security updates to workstations and machines, both Windows and Mac, safeguarding against vulnerabilities and enhancing system resilience. Performed regular inspections of firewalls, penetration tests for analysis of network ecosystem.
- Set up VLAN, designing and configuring the network infrastructure that supports containerized applications in Docker.
- Ensured compliance by verifying/implementing correct policies regarding back up locations and frequency across different systems, promoting adherence to industry standards and regulatory requirements.

Project Manager | Project Management | Allstate | (*Full-time*)

1/14/2018-6/14/2020

- Supervised 3 migrations of server application. Participated in agile framework with standard daily stand-ups in two-week sprint iterations.
- Maintained mature application development practices using them as a model for developed work, reducing onboard-to-production time from new developers.
- Analyze content performance across reporting platforms and design automated business processes using SharePoint Designer. Manage web content, pages, and layouts using SharePoint's content management features.
- Connect SharePoint to external data sources such as Excel, SQL Server, or Power BI to visualize and analyze data
- Work with developers to build React frameworks and RESTful APIs, mitigating problems with TLS from unverified data allowing developers more time to focus on building front-end applications with routing, data fetching, and other features.
- Ensured continuity of data by rigorously validating integrity across platforms, minimizing errors, and ensuring the availability of accurate information throughout the project life cycle.
- Contributed to change management network documentation and updated records of configuration changes via SharePoint & Confluence.

***Application Developer** | Alliance Tech, Inc. | Washington D.C. (Intern)

2/11/2015 -9/12/2017

- Analyze user requirements and business processes to design and implement scalable software solutions for .NET applications.
- Interact with SQL databases, fetching data from the database, displaying critical information specific to user profiles.
- Collaborate with stakeholders to gather and document system requirements, ensuring alignment with business objectives.
- Collaborated in agile environments with fast iterations and daily code reviews.
- Proactively sought out refactoring code and optimizing queries.
- Built data pipelines for ETL, optimized big data queries
 - o Skills: Spark SQL, Python, Unix, Airflow, AWS
- Built secure Microservices, Rest API with web and Android front-end.
 - o Skills: Java, Spring Boot, Kafka, JPA-Hibernate, SQL Server, Oracle, React, Apache
- Event/messaging services with Kafka, Tibco, RabbitMQ
 - o CI-CD with Gradle, Maven, Jenkins, Docker, Git

Electrical Engineering**University of the District of Columbia** | *Electrical Engineering Project Advisor*

08/1/ 2022 – 04/10/2023

Develop a device that could monitor contents of water & take measurements of the quality, then store the information to be accessed for future analysis.

Project Goal: Ensure limited contamination when fish farming, optimizing farms production. Item: RC Water Monitoring Buoy.

- Assisted in the modeling of 3D printed buoy using SolidWorks, an enclosed system that provided the space to specification, for the power supply, wiring, and motor providing mobility. Implemented electric schematic design into circuit assembly.
- Implemented PLC Logic controls applications using PyPLC to facilitate movement of buoy in water.
- Analyzed and troubleshoot system failures tested and implemented necessary changes for successful deployment on presentation day.

Technologies and tools: PH sensor, total dissolved solids sensor, ammonia sensor, sonar sensor, and turbidity sensor (monitors clarity of water), C#.

University of North Carolina Agricultural & Technical State University, Greensboro, NC— *Team Lead* | (*Student*) 01/16/ 2019 – 12/10/2020

Capstone Project: Team leader for liquid purity testing device leveraging ionization for fluids, that provided a unique signature for detection.

Requirements: Create an IoT device that could measure and store information digitally and display this information.

- Using AutoCAD Inventor, created blueprint design and printed housing of ultrasonic probe, power supply, total dissolved solid sensor, IR sensor, and time of flight sensor, internal wiring and troubleshoot system using Python's PyPLC library.
- Using Python and mapped logic to Arduino controller. Conducted code reviews ensuring code quality and maintainability.
- Used Spice for circuit analysis before assembling, steady-state analysis to determine operating point to calculate parameters such as power dissipation and
- Implemented PLC Logic controller configuration using PyPLC to facilitate movement of RC on land.
- Performed circuit tests, determined power consumption and safety margins and to develop cases for improvement to implement into later technologies.
- Designed and implemented a data analysis dashboard using Python, Flask, and Chart.js.

Both projects detailed on website