Norman Frank Cook, IV

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EDUCATION

Louisiana Tech University, Ruston, LA

Bachelor, March 2024
Major: Computer Science
Concentration: Cyber Security
Minor: Music Performance
GPA: 3.78/4.0 GPA

Louisiana Tech University, Ruston, LA

Bachelor, May 2021
Major: Nanosystems Engineering
Concentration: Biomedical
GPA: 3.76/4.0 GPA

TECHNICAL SKILLS

Languages:

- Java, JavaScript, Python, HTML, CSS, TypeScript, C#, PHP/MySQL, WegGL, jQuery, Bash/Shell, C Arduino, Apache

Operating Systems:

- Linux Mint, Ubuntu, Xubuntu, Windows, OS X, iOS, Android, Ubuntu Touch

Software:

- Raspberry PI, Materials Studio, Google Colab, SolidWorks, MATLAB, COMSOL, Arduino, UML, Eclipse, VSCode, Visual Studios, Oracle VM

PROJECTS

2024 Jekyll Website
- nfcook.com
- Jekyll is a framework for building web projects and generating static sites using Ruby. Fortunately, my website can be hosted for free through using Netlify and GitHub.

2024 Axolotl
- A cyber security challenge that is organized into three levels, which encourages the programmer to dig through a file system that contains some useful c files, a key, and a pygame application.

2024 Selk
- A sci-fi game with a setting on Titan that contains three challenge domes for the player. Our focus was always on exploring a colorful and vibrant environment, but I primarily focused on landscape and environment design, modeling, and character animation.

2024 Dijkstra Implementation
- A program that implements Dijkstra's algorithm to compute the shortest path tree for topology data given as a CSV file.

2024 Raytracing Engine

- A Python engine capable of rendering spheres and planes, as well as calculating reflective and refractive rays. Includes customizable settings for the maximum view distance and the number of recursive reflections.

2024 Graphics Engine
- A Python engine capable of rending objects, such as pyramids, boxes, and cylinders. Transformations can be applied to the currently selected object, such as rotation, scaling, translation, and a reset option. Most impressive are the five render and shading modes available: wire-frame, polygon fill, flat shading, Gouraud shading, and Phong shading.

2023 Horse Health Predicition
- Data mined a dataset containing horse veterinarian records to figure out if any meaningful correlations existed. We used Google Colab, along with Pandas, Numpy, and Seaborn, to develop software that could analyze 300 horse records from a CSV file.

2023 Cyberstorm
- A cyber security event where teams of students competed against each other in a race for the most points. We used all our previous knowledge from the course to solve challenges, which included programs that could decode or encode binary, a Vigenere cipher, a covert ftp channel, a timelock program, an XOR crypto method, and a steganography program.

2023 Canvas / Gallery
- Canvas & Gallery serve an interconnected function as a web application. The Canvas allows visitors to draw anything they wish, and, once finished, users can choose to submit their image to a database. If you swap to the Gallery, every image from the database is displayed, which in turn showcases the user's finished artwork.

2023 Guestbook
- Guestbook prompts the user for their email, name, and comment and saves this information to a database. Just below the post button, all previous signatures are displayed with dates and timestamps.

2023 P3DE
- An earnest attempt at recreating the original ray casting engines from the 90s for Doom/Wolfenstein type games. No goal exists, but you do load into a demo room with textures on walls, some animated textures, and the player has a weapon that destroys walls.

2023 StupidDuck
- An impressive 2D web-engine for a silly game that was built from scratch following Travis Vronman's incredible tutorial. A boundless amount was learned about game engines and how developers tackle solutions. I found myself making more buses than city transit, stepping through animation control, and calculating transformations for objects.

2021 Kill the Phish
2021 Car Rental Service
2021 Quantum Computer Architecture
2021 Computer Theory
2020 Sand Simulator
2020 Cherry Game
2020 Non-deterministic Automata
2019 Eternal Knight
2019 Raspberry Pi Sonar
2019 Kinematic
2019 Room Adventure
2019 TI Wafer Handler

ORGANIZATIONS

2017-2018 Percussion Ensemble
2017-2018 Astronomy Club
2015-2017 Marching Band
2015-2016 Jazz Ensemble
2015-2016 Chess Organization
2014-2015 Boe-Bot Club

ACHIEVEMENTS

2024 Dean's List
2023 Google Cloud Computing Foundations
2018 Inherently Safer Design
2018 Identifying Minimizing Process Safety Hazards

WORK EXPERIENCE

Walmart ***Jun. 2022 – Jun. 2023***
Overnight Stocker *Denver, CO*
- Efficiently stocked a variety of merchandise and groceries onto designated shelves
- Proficiently operated pallet jacks and balers

Whataburger **Nov. 2021 – May 2022**
Employee *Kingwood, TX*
- Managed front-counter and drive-thru cash registers
- Executed kitchen duties, including operating the grill, fry station, and meal assembly

Majestic Valley Wilderness Lodge ***Jun. 2021 – Aug. 2021***
On-site Employee *Glacier View, AK*
- Conducted thorough housekeeping duties for twenty rooms
- Assisted as a dishwasher when needed
- Provided support to the bartender as a bar-back when required

Louisiana Tech Residential Life **May *2017 – May 2021***
Hall Director & Resident Assistant *Ruston, LA*
- Managed the upkeep of an on-campus dormitory accommodating 150 residents, and fostered a positive living environment through regular engagement
- Directed a team of three Resident Assistants in effectively overseeing dormitory operations and student welfare
- Maintained open communication channels by providing regular reports to stakeholders within Residential Life

Domino's **Jun. 2017 – Sep. 2017**
Delivery Driver *Kingwood, TX*
- Delivered goods efficiently, ensuring timely arrivals to customers
- Maintained a positive demeanor while interacting with customers
- Assumed responsibility for closing the store during night shifts

Associated Technologies & Manufacturing **May 2015 – Sep. 2015**
Machine Operator *Baton Rouge, LA*
- Proficiently operated CNC mill and lathe machinery to precise specifications, ensuring quality production outcomes

- Safely operated a forklift within the warehouse environment, facilitating smooth material handling and storage operations

REFERENCES

Sandra Zivanovic
Chair, Electrical Engineering
Louisiana Tech University
318.257.5145

Casey Ingram
Head, Residential Life
Louisiana Tech University
281.360.8000

Gregory Lyons
Head, Percussion
Louisiana Tech University
318.257.5470