

# Reginald Kotey Appiah-Sekyere

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## EDUCATION

### New York University

Bachelor of Science in Computer Science, Minor in Mathematics

GPA: 3.8

New York, United States

Aug 2022 – May 2026

## EXPERIENCE

### Software Engineering Intern

Buzz Mobility

Apr 2024 – Jul 2024

Abu Dhabi, UAE

- Developed a live map tracking system, providing real-time visibility of mobility assets, reducing tracking errors by 15%, and boosting user satisfaction by 20%.
- Designed and integrated secure mobile payments features using the PayStack **API**, implementing secure transaction protocols. This drove a 12% increase in daily transactions and enhanced overall platform reliability by 10%.
- Enhanced client-side security through **CSP** implementation and **webpack** optimization, reducing **XSS vulnerabilities** and improving load times by 25%.

### Software Engineering Intern

UCC, Network Section

Jun 2023 – Aug 2023

Cape Coast, GH

- Developed a campus network problem management system using **NextJS**, and **MongoDB**, increasing error detection by 20% and reducing annual costs by 15%.
- Executed comprehensive **QA testing** for a new application, uncovering and documenting **4 critical bugs** to enhance system reliability and performance.
- Monitored and analyzed network traffic in a newly developed **LAN** using **Wireshark**, identifying bottlenecks and optimizing performance to reduce downtime by 40%.

## PROJECTS

### UniShop (FullStack E-commerce) | React, Express, MongoDB, Tailwind CSS

Oct 2024 - Dec 2024

- Designed an image management system with **Multer** and **Node.js fs** module to handle image uploads and storage on the server, achieving a 40% reduction in retrieval latency and enabling seamless integration of product images.
- Architected a secure e-commerce platform with **JWT** authentication and **bcrypt** password hashing, implementing protected routes and role-based access control, resulting in a 30% increase in platform security and user trust.
- Engineered a **RESTful API** with **Express** and **MongoDB** for real-time inventory, order processing, and payments. Optimized queries improved system performance by 35% and reduced API response times by 25%.

### Rekas OS (Operating System) | C, Assembly, QEMU, Docker

Sep 2024 - Feb 2025

- Developed a custom **x86\_64** operating system with process management, virtual memory mapping with paging, system calls, and virtual file system ensuring memory isolation and efficient resource allocation.
- Implemented **fork()** with context switching in **C** and **Assembly**, managing CPU registers and process states, and integrated **concurrent programming** with **kernel-level threading** for multitasking.
- Containerized the OS development environment with Docker for reproducible builds, enabling cross-platform debugging with **QEMU** and **GDB** while reducing setup time by 50%.

## TECHNICAL SKILLS

**Languages:** C++, C, Java, JavaScript, Python, SQL (MySQL), HTML, CSS, Assembly, MATLAB

**Frameworks:** React, Express, Node.js, NextJS, WordPress, Tailwind, THREE.js, GSAP, MongoDB, Supabase

**Developer Tools:** Git, Google Cloud Platform, Visual Studio, MongoDB, Linux, Docker, Arduino IDE

**Skills:** DevOps Programming, Full-Stack Development, Mobile Development, Network Engineering, Photography

## AFFILIATIONS

CodePath | Member

Aug - Present

ColorStack | Member

Jun - Present