

# STEPHEN OWUSU BADU

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## EDUCATION

### Colby College

Expected Graduation: May 2027

Bachelor of Arts in History and Computer Science

- **Award:** Perseverance Award (2023-2024 Academic Year)
- **Relevant Coursework:** Data Structures and Algorithms, Mathematical Reasoning, OOPs, Software Engineering, Global History, US History from 1865-present, Early European History, The Great Depression, In The News, German History

## PROFESSIONAL EXPERIENCE

### SureStart AI Trailblazers - Applied Deep Learning Focus

Waterville, ME

AI/Machine Learning Intern (NumPy, Pandas, Scikit-Learn, TensorFlow, CNNs, GANs, LLMs)

May 2025 - August 2025

- Built Locus, a rideshare app projected to serve **10K+** students; implemented ML-based ride-matching with real-time routing
- Developed full-stack prototype using Flask, PostgreSQL, and React with integrated mapping for pricing and location
- Processed **1,200+** ride requests in pilot; improved matching algorithm efficiency by **30%** through iterative tuning

### ITS Events, Colby College

Waterville, ME

Student Multimedia Technician

September 2023 – Present

- Provide technical support for audio-visual technology across campus classrooms and event spaces to facilitate multimedia presentations and enhance learning experiences.
- Provide technical support for Colby Apps (Email, My Campus Portal), password management, directory and profile updates, academic consultation services, and network access troubleshooting.
- Utilized TeamDynamix to automate task management, streamline ticketing processes, and enhance workflow efficiency for technical support services.

### Security and Technology Initiative, Opoku Ware School

Kumasi, Ghana (Remote)

Team Lead and Science Outreach Leader (Python, React, JS, HTML/CSS)

May 2024 – October 2024

- Proposed and led a secure biometric Exit system; reduced fraudulent exits and boosted campus safety significantly.
- Partnered with IT to build a web-based tracking system; resulted in **90%** decline in student-related security threats.

### The Colby Echo, Colby College

Waterville, ME

News Reporter

September 2025 - Present

- Write weekly **850-word** news articles on campus issues and events.
- Conduct **interviews with students, faculty, and staff** to ensure accurate and engaging reporting.
- Collaborate with editors and fellow writers to meet publication deadlines and maintain journalistic standards.

### Young Achievers Foundation, Ghana

Accra, Ghana (Remote)

Volunteer

July 2023 – Present

- Guided high school students in crafting competitive application essays, contributing to admissions offers from Harvard, Princeton, and Colby.
- Wrote public-facing blog posts addressing digital access challenges in under-resourced communities.
- Produced reflective pieces that sparked meaningful academic discussions with professors and peers.

## PROJECTS

### Thermocline Detection and Water Density Analysis, Great Pond

- Processed 10K+ data points in Python to compute density and locate thermocline via max gradient calculation.
- Correlated thermocline depth with temp, radiation, and wind via multivariable regression modeling.
- Automated CLI-based tool for day-specific analysis; smoothing techniques improved accuracy by **15%**.

### Simulating Elephant Population Management, Kruger National Park

- Simulated elephant population growth using parameterized birth/survival rates and darting strategies.
- Ran **1,000+** simulations to find sustainable darting range (**20–30%**) based on demographic variation.
- Refactored simulation using an Elephant class; improved code modularity and reduced update time by **40%**.

### Independent Study — Department of History, Colby College

Waterville, ME

Advisor: Professor Weisbrot

September 2025 – Present

- Researching how **Ghana's 1957 independence** influenced **U.S. civil rights movements** (1957–1965).
- Analyzing primary and secondary sources on African decolonization and transnational activism.
- Writing a **25-page research essay** as the final project.

## ACTIVITIES & LEADERSHIP

### Colby Hackers (Club Member)

September 2023 – Present

- Engage in team coding challenges and innovation projects; recruited women and URM students to join the club

### Colby Robotics Club (Club Member)

September 2023 – Present

- Collaborate on team-based robotics challenges involving autonomous navigation, sensor integration, and mechanical prototyping