ERNEST BRUCE

Contact Information:

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Objective:

Final-Year Information Technology Student at Wisconsin University with a strong academic foundation in software development, data analysis, mobile app development and database management systems. Passionate about building scalable web applications, analyzing complex datasets, and developing intuitive mobile solutions. Skilled in Python, Java, C++, SQL, and full-stack web technologies. Demonstrated ability to apply theoretical knowledge to real-world problems through academic projects, internships, and open-source contributions. Seeking to leverage technical expertise and analytical mindset in a dynamic technology role focused on innovation and user-centric solutions.

Education:

Wisconsin International University College, Ghana

Bachelor of Science in Information Technology

Expected Graduation: May 2026

Current Year: Final Year

Relevant coursework: Data Analysis, Software Engineering, Data Structures and Algorithm, Database Management Systems, Website Development, Object Oriented Programming in Java, Mobile App Development, Management Information system (MIS), IT Service Management, Embedded systems, Distributed systems, project management, Artificial Intelligence and Machine Learning, Professional Ethics in ICT.

Experience:

1. Wisconsin International University College – IT Faculty

Teaching Assistant (Discrete Math, Calculus, Numerical Methods)

Aug 2024 – May 2026

- Facilitated weekly class sessions for these courses with a combined enrollment of 170+ students, improving average assignment submission rates by 35% through structured walkthroughs and teaching support.
- Developed and graded assignments and quizzes, providing personalized feedback that contributed to a 15% improvement in final exam scores compared to the previous academic year.
- Mentored 25+ students one-on-one, helping them overcome challenges in Discrete Math, Calculus and Numerical methods.

2. Independent Project – Unsupervised Anomaly Detection System

Research & Development Lead

Oct 2025 – Present

- Designed and implemented an unsupervised anomaly detection algorithm using Principal Component Analysis (PCA), Factor Analysis (FA), Local Outlier Factor (LOF) with adaptive thresholding for gene expression datasets. Developed a user-friendly streamlit-based mobile application for data visualization.
- Achieved 94% detection accuracy and reduced false positives by 42% compared to baseline statistical thresholding methods, validated using synthetic and real-world datasets.
- Deployed the system on various devices, detecting 10 anomalous events over a 4-week period with <5% false alarm rate.

3. Freelance Web & Mobile Development Projects

Full-Stack Developer

Jun 2024 – Present

- Built 4 responsive websites and web apps using HTML, CSS, JavaScript, PHP, React.js, and Node.js, for educational purposes.
- Developed 6 cross-platform mobile applications using Flutter and React native.
- Developed 2 java applications and a python-based streamlit mobile application.

Leadership & Impact:

AREA	ACHIEVEMENT
Technical Leadership	Led a team of 3 in a university capstone project, delivering a fully functional client-server chat application using Java and MySQL.
Academic Excellence	Maintained a GPA of 4.0/4.0 throughout undergraduate studies.

Skills:

- Programming Languages: Java, Python, C++, Visual Basic, Dart, Javascript
- Web Development: HTML, CSS, JavaScript, PhP, AJAX, JSON
- Mobile App Development: React-native, Flutter, Java
- Data Analysis: Pandas, NumPy, Matplotlib, Seaborn, Excel, SPSS
- Databases: MySQL, PostgreSQL, Firebase
- Video editing: Movavi, Capcut
- Operating Systems: Windows, Mac OS
- Software Development Life Cycle (SDLC)
- Soft Skills: Problem-solving, Team collaboration, Communication, Time management.
- Other: Data Structures & Algorithms, Cloud Computing, IoT (Arduino), Agile Methodology

Workshops:

- Attended the insurance innovation and Growth forum, organized by ShrinQ
- Attended Full Stack Web Development Webinar, organized by Edureka.
- Attended Digital dialogue series on cybersecurity and elections, organized by Africa Center for Digital Transformation (ACDT)

Volunteer IT Support:

British International School, Accra, Ghana (January 2024 – August 2024)

- Conducted basic IT training sessions for staff members on how to incorporate technology into teaching and learning.

Academic Projects:

- School and Clinic Website Development
- Church and Organization Management System
- Bank app using java
- Developed a notes-taking app and an app for ordering products using react-native.
- Developed fully functional websites using HTML, CSS, JavaScript, PhP, Ajax and Json.
- Integrated a backend database as well as implementing user authentication.

Certifications:

- AI Prompt Engineering certificate
- Mobile App Development in Flutter Certificate
- Certificate of Participation- for attending the Digital Dialogue Series on Cybersecurity by ACDT.
- Certificate of Attendance- for attending the full stack web development Internship program by Edureka.

Extracurricular Activities:

Member, WIUC School of Computing and Technology.

References:

Available upon request