ASHRAF ABDUL-MUUMIN

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EDUCATION

Illinois Institute of Technology, Chicago, IL   May 2026
Masters, Information Technology, GPA: 4.0

Garden City University College, Kumasi, Ghana   Sep 2018 – Jun 2022
Bachelor of Science, Computer Science

WORK EXPERIENCE

Software Engineer (AI/ML)
AIFS – Chicago, IL   Oct 2024 – Present
- **Achieved a 35%** improvement in AI-driven response accuracy and reduced processing latency by 40% through enhancing message processing capabilities using C#.
- Reduced query response time from 250ms to 80ms and scaled efficiently to handle 300K+ messages/month by optimizing data storage and retrieval through the implementation of **Azure Cosmos DB**.
- Improved authentication reliability to 99.9% and reduced unauthorized access incidents by 60% through implementing a user management service leveraging **Microsoft Entra ID** to enhance security and access control.
- **Cut** average deployment times from 15 minutes to under 3 minutes and reduced manual errors by 80% by automating **Azure Function App** deployment workflows using *GitHub Actions*, enabling seamless **CI/CD operations**.
- Ensured timely delivery of development tasks and alignment with team goals by **rigorously** following *Agile methodologies* through daily stand-ups, spring planning, and retrospectives, consistently completing and updating assigned work items.
- **Increased** request processing efficiency by 50% and **reduced cloud costs by 25%** by deploying a highly scalable HTTP Azure Function App using .NET and Azure, supporting over 10,000 requests per second.

PHP Full Stack Engineer
Onesolution – Kumasi, GH   Sep 2023 – Aug 2024
- Developed and maintained the PHP-based desktop version of a Point-of-Sale system, applying backend architecture principles to support cross-platform functionality and offline resilience.
- Enhanced data performance by rewriting SQL queries and optimizing indexes, reducing database query time by 45% and improving page responsiveness.
- Managed API-driven real-time synchronization for transactional data, ensuring consistency and seamless integration across distributed systems.

Junior Backend Engineer
Kwame Nkrumah University – Kumasi, GH   Sep 2022 – Aug 2023
- Modified students' database of the Student Portal for the University, resulting in a reduction of data fetching complications and data inconsistencies by more than 50%.
- Produced a Data Export UI page in **HTML, CSS, JavaScript, and MySQL-backed** services for other departments to operate, eliminating the need for seeking the UITS department's assistance with exporting data directly from database. All departments now make use of this page.
- Participated in daily Agile stand-ups to complete assigned user stories and sprints, collaborating with backend developers and providing timely progress updates to supervisors, which contributed to a more structured and accountable workflow.

ACHIEVEMENTS

1st Place ACM ScarletHacks 2025 Hackathon

ACM Illinois Institute of Technology – Chicago, IL

- **Guided and led** a team of 2 to win "*Best use of AI"* application in ACM's ScarletHacks 2025 Hackathon.
- Engineered a real-time data ingestion pipeline with **Apache Kafka and Spark Streaming**, enabling automated processing of *thousands of records per day*, which powered near-real-time decision support for enterprise operations.
- Designed and built a scalable platform that integrates text, image, and structured data analysis using state-of-the-art deep learning architectures (transformers for NLP, CNNs for visual data, and graph neural networks for relational insights).

VOLUNTEER EXPERIENCE

Web Developer

ACM Illinois Institute of Technology – Chicago, IL   Nov 2024 – Present

- Developed and deployed ACM Illinois Tech's official website, leveraging Next.js, TypeScript, and Tailwind CSS, resulting in a **45% increase** in member engagement and streamlined event registration.
- Achieved seamless event integration, through custom-built "Add to Calendar" functionality (*Google and Outlook APIs*), enhancing user experience and boosting event attendance by 30%.
- Boosted site responsiveness and accessibility, through rigorous UI/UX optimization and Figma prototype iterations, which improved mobile user retention and resulted in a **20% decrease** in bounce rate.

PROJECTS

A. **PredictBo – Bo Predictor –** https://huggingface.co/spaces/predictbo/predictbo

- Developed a web app to estimate Bo using an end-to-end Deep Neural Network pipeline trained on 812 data point observations utilizing features including Bubble Point Pressure, Temperature, Solution Gas-Oil Ratio, and API Gravity.
- Achieved an MSE of 0.0026, R^2 of 95.46%, and MAE of 0.0347 on the testing set.
- Skills used were Discretization, Regularization, Adam Optimization, Bayesian Optimization, Deployment, Pipeline Automation, Version Control and Cross-Disciplinary Collaboration.

SKILLS

Languages | C#, PYTHON, TYPESCRIPT, JAVASCRIPT, PHP, SQL (POSTGRESQL, MYSQL), HTML, CSS

Frameworks | .NET, NEXTJS, REACTJS, NODE.JS/EXPRESSJS, JQUERY, TAILWINDCSS, BOOTSTRAPCSS, NUMPY

Tools | MICROSOFT AZURE, MS PROJECT, VERCEL, GIT, DOCKER, AI, FIGMA, KERAS, TENSORFLOW, STREAMLIT, DATA VISUALIZATION, MATPLOTLIB, SEABORN, PANDAS, PROSPER, PETREL

Technical Competencies | RESTFUL API, AGILE, RESPONSIVE DESIGN, USER INTERFACE DESIGN, USER EXPERIENCE, DATA STRUCTURES, LINUX, BASH, OPERATING SYSTEMS, DATA MODELS, MICROSERVICES, SDLC, DESIGN PATTERNS