**PRINCE SAMUEL KYEREMANTENG**

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# **RESEARCH INTERESTS**

AI-driven Software Engineering (automated code generation, software testing with LLMs, AI Agents for Software Engineering)

# **EDUCATION**

* MPhil, Computer Science, University of Ghana, Accra (CGPA: 3.7/4.0) | 2024 – Present
* BSc, Computer Science, University of Ghana, Accra (CGPA: 3.45/4.0) | 2019 – 2023
* Relevant Coursework: Advanced Software Engineering, Machine Learning, AI, Databases, DSA

# **RESEARCH EXPERIENCE**

**Missing Data Imputation Techniques, Challenges, Innovations and Applications: A Review** Oct. 2024 – Present

* Main Author/Researcher, MPhil. Thesis, University of Ghana
* Conducted a systematic literature review of 50+ papers on missing data imputation techniques, focusing on statistical (e.g., Mean, Mode), ML-based (e.g. missForest, kNN) and DL-based (e.g., GAN) methods.
* Identified key challenges, including computational complexity and scalability, and proposed potential innovations for real-time applications.
* Presented findings at the University of Ghana Postgraduate Workshop, earning the 3rd Best Paper Award for methodological rigor.

**Federated Learning at the Edge: Enhancing Privacy and Efficiency in Distributed AI Systems**

*Graduate Research Assistant/Co-Author, University of Ghana* Jun-Jul. 2025

* Contributed to this research as a graduate assistance/co-author by conducting a comprehensive literature review on the topic.
* Managed papers and citations using the Mendeley platform.
* Designed architectural diagrams to illustrate concepts such as Federated Learning and various types of Federated Learning.

**PoAD-Lite: A Lightweight, Activity-Aware Consensus Protocol for Scalable and Energy-Efficient IoT Blockchains** Jul-Aug. 2025

*Graduate Research Assistant, University of Ghana*

* Contributed to this research as a graduate assistance/co-author by conducting a comprehensive literature review on the topic.
* Managed papers and citations using the Mendeley platform.

# **PUBLICATIONS**

* Kyeremanteng, P.S. (2025). “Missing Data Imputation Techniques, Challenges, Innovations, and Applications: A Review.” Presented at University of Ghana Postgraduate Workshop (3rd Best Paper Award). [Under review at …].

# **WORK EXPERIENCE**

**University of Ghana, Department of Computer Science** Aug. 2023 – Present

*Teaching Assistant / Graduate Assistant*

* Delivered tutorials to 150+ students per semester in Advanced Databases and AI, improving average student grades by at least 10% through hands-on coding sessions.
* Facilitated lecture sessions and grading assignments and exams for undergraduate students.

**Bricsky Software Development Company | Software Developer** Feb. 2024 – Aug. 2024

* Designed and implemented a robust Backend Architecture for the Oysloe Marketplace App.
* Developed efficient REST APIs to handle requests, improving API efficiency by over 20%.
* Implemented WebSocket connections for real-time communication leading to faster response times and reduced latency.

**PKay Software Consultancy | Founder and Lead Consultant May**. 2024 – Present

* Designed and led the implementation of several Softwares for different clients.
* Led a team of 5 developers to design and deploy an Admissions Management System for GIMPA, processing 1000+ applications with 99% uptime and reducing processing time by 50+%.

**HACKATHON**

**Nyansapo AI Hackathon 4 - 6th** Oct 2023

* Collaborated with two students to participate in the Nyansapo AI Hackathon.
* Developed and presented a proof-of-concept model for detecting power outages in Ghana.
* We had the 4th best presentation out of 17 applicants.

# **VOLUNTEER/LEADERSHIP EXPERIENCE**

* Pkay Mentorship Program, Founder (Sep. 2024 – Present): Mentored 20+ undergraduate women in UI design and software development, fostering diversity in tech.
* ICT Education Volunteer, Global Academy School & Bridge IT (Sep. – Dec. 2020): Taught ICT to 1000+ students across 20 schools in Oti Region, Ghana, completing syllabus ahead of schedule.

# **SKILLS**

* Programming: Python, Django, Flask, FastAPI, HTML/CSS/JS, Flutter
* AI/ML: Machine Learning, LLMs, Prompt Engineering
* Other: System Design, Databases (SQL), API Development