

Samuel Abedu

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Education

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| September 2022 – Present | ■ Ph.D. in Software Engineering, Concordia University , Montreal, Canada.
Research focused on applying artificial intelligence to automate software engineering processes. |
| August 2018 – July 2020 | ■ M.Phil. Computer Science, University of Ghana , Accra, Ghana.
Thesis title: <i>Deep Learning and Machine Learning Algorithms on Small-Sized Datasets in Software Effort Estimation: A Comparative Study</i> . |
| September 2019 – February 2020 | ■ Erasmus+ Mobility Program Mykolas Romeris University , Vilnius, Lithuania. |
| October 2013 – June 2017 | ■ B.Sc. Computer Science, University of Cape Coast , Cape Coast, Ghana.
Project: <i>CampusAlert – a mobile application for students to call for help when they feel endangered. Developed together with two colleagues.</i> |

Employment History

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| December 2021 – August 2022 | ■ Software Engineer (Backend) at Hubtel, Accra Ghana.
Projects: <i>Hubtel Standard Services, POS Payment Platform and eCommerce.</i> |
| February 2021 – November 2021 | ■ Research/Teaching Assistant (Working with Dr. Solomon Mensah) at the University of Ghana. |
| February 2020 – January 2021 | ■ Graduate Assistant (Assigned to Dr. Solomon Mensah) at the University of Ghana. |
| September 2017 – July 2018 | ■ Research, Statistics and Information (National Service as RSI Personnel) at the Ghana Tourism Authority. |

Projects

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| January 2025 – May 2026 | ■ Drug Information Chatbot. Industry collaboration with Sandoz (Global Pharmaceutical Company).
Developed and deployed a production chatbot to automate responses to drug-related inquiries from health professionals and patients. |
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Research Publications

Journal Articles

- 1 **S. Abedu**, S. Khatoonabadi, and E. Shihab, “Synergizing LLMs and Knowledge Graphs: A Novel Approach to Software Repository-Related Question Answering,” *ACM Transactions on Software Engineering and Methodology*, 2026.  DOI: 10.1145/3796510.

- 2 **S. Abedu**, S. Mensah, and F. Boafo, “An empirical study on small-sized datasets based on eubank’s optimal spacing theorem,” *SN Computer Science*, vol. 6, no. 1, pp. 1–19, 2025.
- 3 J. Latendresse, **S. Abedu**, A. Abdellatif, and E. Shihab, “An Exploratory Study on Machine Learning Model Management,” *ACM Transactions on Software Engineering and Methodology*, 2024.  DOI: 10.1145/3688841.

Conference Proceedings

- 1 **S. Abedu**, S. Owolabi, M. S. Ruiz Rodriguez, *et al.*, “Experiences Developing an AI Chatbot in the Pharmaceutical Industry,” in *Proceedings of the 2026 IEEE/ACM 7th International Workshop on Bots and Agents in Software Engineering (BoatSE)*, 2026.
- 2 O. Oyelayo, **S. Abedu**, S. Khatoonabadi, and E. Shihab, “Developer Challenges in the Adoption of Model Context Protocol in AI Agent Development,” in *Proceedings of the 2026 IEEE/ACM 7th International Workshop on Bots and Agents in Software Engineering (BoatSE)*, 2026.
- 3 **S. Abedu**, L. Menneron, S. Khatoonabadi, and E. Shihab, “Reepochat: An LLM-Powered Chatbot for GitHub Repository Question-Answering,” in *Proceedings of the 2025 IEEE/ACM 22nd International Conference on Mining Software Repositories (MSR)*, 2025.
- 4 **S. Abedu**, A. Abdellatif, and E. Shihab, “LLM-Based Chatbots for Mining Software Repositories: Challenges and Opportunities,” in *Proceedings of the 28th International Conference on Evaluation and Assessment in Software Engineering*, ser. EASE '24, New York, NY, USA: Association for Computing Machinery, Jun. 2024, pp. 201–210, ISBN: 979-8-4007-1701-7.  DOI: 10.1145/3661167.3661218. (visited on 11/18/2024).
- 5 S. A. Brown, B. A. Weyori, A. F. Adekoya, P. K. Kudjo, S. Mensah, and **S. Abedu**, “DeepLaBB: A Deep Learning Framework for Blocking Bugs,” in *2021 International Conference on Cyber Security and Internet of Things (ICSIoT)*, Dec. 2021, pp. 22–25.  DOI: 10.1109/ICSIoT55070.2021.00013.

Skills

Languages	 Strong reading, writing and speaking competencies for English, and Akan (Ghanaian dialect).
Programming Languages	 Python, PHP, MatLab, $\text{\LaTeX}$
Databases	 MySQL, PostgreSQL, Elasticsearch, Neo4j.

Miscellaneous Experience

Service

- MSR 2026  **Junior PC Member**
 **PC Member, Data and Tool Showcase Track**

Volunteering

- July, 2026  Serving as a student volunteer for The 2026 ACM International Conference on the Foundations of Software Engineering (FSE) hosted in Montreal
- 2025 – Present  Serving as a member of the audit team of the Ghana Methodist Church of Montreal
- 2024 – Present  Serving as the statistician of the Ghana Methodist Church of Montreal

Miscellaneous Experience (continued)

Awards and Achievements

- 2026  **MSR 2026 Distinguished Junior PC Reviewer Award**, Awarded to Junior PC members whose reviews were deemed exceptional by the program committee.
- 2024  **Concordia Conference and Exposition Award**, Valued at \$1000 for presenting work at conferences .
-  **Concordia GSA Conference Funding**, Awarded \$243.16 to support travel expenses EASE'24 Conference.
- 2022  **Concordia International Tuition of Excellence** , Scholarship awarded to PhD students in Concordia University valued at \$44,893.00 to reduce tuition fees to Quebec rate.

Certification

- 2019  **Artificial Intelligence Analyst 2019 Mastery Award**. Awarded by IBM Africa Skills Academy.
- 2017  **Agile Scrum Foundation**. Awarded by EXIN Netherlands.
-  **PRINCE2® Foundation Certificate in Project Management**. Awarded by EXIN Netherlands.

References

Prof Emad Shihab

Associate Dean, Research and Innovation,
Professor and Concordia Research Chair,
Concordia University

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Prof Solomon Mensah

Associate Professor, Department of Computer Science,
College of Basic and Applied Sciences,
University of Ghana

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Dr Ahmad Abdellatif

Assistant Professor, Department of Electrical and
Software Engineering,
Schulich School of Engineering,
University of Calgary

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