Emmanuella Ametsi
Software & Machine Learning Engineer

PERSONAL DETAILS

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ACADEMIC BACKGROUND

Chalmers University of Technology

PhD Candidate - Software Engineering & Interaction Design,
Deparment of Computer Science & Engineering,2025 - Date

Carnegie Mellon University

Master Of Science in Information Technology, 2020 - 2022

- Scholar, 2020-2022, MasterCard Foundation Scholarship
- President, 2020-2021, Techy Talkers Toastmasters Club
- General Manager, 2020-2021, Women in Tech Club

University of Ghana

Bachelor Of Science in Computer Science, 2015 - 2019

- Scholar, 2015-2019, General Electric Scholarship
- Member, 2015-2016, Publications Commitee, Student Representative Council

PROFESSIONAL & TEACHING EXPERIENCE

Industrial PhD Candidate

Volvo Cars - *Sweden* August 2022 - Date

ViPP(Volvo Cars Industrial PhD Candidate) – Safe Vehicle Automation.
- Researching in the area of AI Safety for Autonomous driving.

Software Engineer – AI & Robotics Lab/Interior Perception Team (Safety Center).
- Developed a proof of concept for replacing hardware in the Hands-Off Detection module with machine learning software.
- Leveraged overhead cameras and object detection models to identify driver hand positions on the steering wheel, enabling hands-on/off detection.

iOS Engineer – Mobile Experience Cluster, Car Communications.
- Collaborated with a team of engineers to implement Over-the-Air (OTA) functionality in the Volvo Cars App, enabling seamless software updates and enhanced vehicle connectivity.
- Contributed to the development and integration of various OTA features, improving user experience by allowing remote diagnostics, software patches, and system updates.

Data Analyst – Global Marketing Analytics.
- Teamed up with 3 other software development graduates to work on a Marketing Mixed Modeling (MMM) Project.
- Built a prototype of an MMM dashboard in Figma and implemented it in Tableau. After which we deployed to an internal server.

Associate Product Manager – Fleet Business Purchase Team
- Led development and implementation of Electrification and TCO (Total Cost of Ownership) modules for Volvo Cars Fleet Business pages.
- Spearheaded SEO improvements for fleet business pages, enhancing search visibility and user engagement.
- Managed activation campaigns for specific car brands, driving engagement and conversions on fleet business platforms.

Software Developer – Vehicle Propulsion, ECU Platform Team
- Worked as a software developer in the team and helped to write basic software for ECUs that control battery and charging functions.

Machine Learning Engineer

Mathis Lab - EPFL, *Switzerland* June - August 2022

- Developed a graphical user interface for real-time video data collection and storage from 9 lab cameras for a home-based functional assessment platform for neurological patients.
- Trained and deployed a machine learning model to annotate video data, supporting research on patient assessments.
- Contributed to the development of innovative tools for neurological patient care and analysis.

Graduate Teaching Assistant

CMU-Africa, *Rwanda*
Design Patterns for Smartphone Development,
August – December 2022

- Collaborated in a team to analyze over 1 billion data points from Bboxx to identify new data combinations and trends.
- Developed new KPIs and dashboard features to help Next Generation Utilities (NGUs) make data-driven business decisions.
- Delivered actionable insights to improve operational efficiency and decision-making for Bboxx's business units.

Big Data Science & Data Analytics,
January – May 2022

- My main responsibilities included :
  - Holding weekly office hours to answer students' questions about assignments and course material.
  - Lead recitation sessions along with other teaching assistants.
  - Grade students assignments and provide feedback.

Fundamentals of Programming & Problem Solving,
September 2021 – January 2022

- My duties include assisting the professor and students of the course by having daily office hours, weekly recitations and lab sessions.I also grade student assignments and give constructive feedback.
- The main programming language language used and taught is Java and some topics covered include; Variables, Loops and Control Structures, Collections, Data Structures and Algorithms.

Data Scientist

BBoxx, *Rwanda* January – May 2022

- Collaborated in a team to analyze over 1 billion data points from Bboxx to identify new data combinations and trends.
- Developed new KPIs and dashboard features to help Next Generation Utilities (NGUs) make data-driven business decisions.
- Delivered actionable insights to improve operational efficiency and decision-making for Bboxx's business units.

Software Engineer

Rwandan Revenue Authority, *Rwanda* May – July 2021

- Designed and developed the front-end of a mobile application using Flutter to help EBM(Electronic Billing Machine) officers in data collection and looking up information on Taxpayers
- The mobile application replaced a manual system of collection and reporting visits made to taxpayers on paper.

Software Engineer

SnooCODE (TinyDavid), *Ghana* 2019 - 2020

- Developed a mobile application and trained a machine learning module to help customers make energy-efficient decisions for home appliances.
- Enhanced client interaction by designing intuitive UI/UX for mobile apps using Flutter and Figma, resulting in a 10% increase in app downloads.
- Improved overall user experience, driving engagement with the company's products and services.

SKILLS & CERTIFICATIONS

- **Programming:** Swift, Python, Dart, Java, JavaScript, Embedded C,R.
- **Databases:** NoSQL(MongoDB), Amazon RedShift, MySQL, Firebase, Big Query
- **Frameworks:** Autosar, ReactJS, NodeJS,Flutter, Android Studio, TensorFlow, Google AutoML, Git, PowerBi , Rstudio, Simulink
- **Domain Expertise:** Machine learning, data science, mobile application development, object-oriented programming, UI/UX development, graphic designing.

ACHIEVEMENTS

- **Leadership & Participation:** Attended the 2nd Pan-African Youth Forum.
- **Awards & Scholarships:** Recipient of Grace Hopper, MasterCard (CMU Africa), and General Electric scholarships (University of Ghana).
- **UI/UX Designing:** Designed user interfaces for startup companies, enhancing user experiences.
- **Public Speaking & Leadership:** Served as Toastmasters President (CMU Africa) and speaker at conferences including DIVA Festival and EiTA Connect.
- **Volunteering:** Alumnae Board Member for Yielding Accomplished African Women and volunteer for ACM Compass Conference 2019.