ALBERT S. HODO

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SUMMARY

Enhancing human experiences, through experimental design and research. Albert has 8+ years of experience designing and prototyping emerging technologies from IoT to XR for research. Taking an approach of observing nature and human needs I strive to present more palpable and practical ideas with technology.

EDUCATION

Master of Design (College of Engineering) Aug 2022 - Dec 2023
University of California, Berkeley

Bachelor of Computer Science Sep 2021 - Jul 2021
Ashesi University

COMPETENCY

- **Programming-** SwiftUI, Spatial Computing, Java, Python**,** React.js, AR/VR, Unity 3D, RealityKit.
- **User Experience-** UX Research, Blender, UI Prototyping, Usability Testing, Experimental Design.
- **Fabrication-** 3D Printing, Laser Cutting, Rapid Prototyping, Sensor Electronics, Fusion 360.
- **Research-** Qualitative and Quantitative Research, Data Analysis, User Testing.

ACCOMPLISHMENTS

- **Design-** MDes Distinguished Scholar Award ’23. MDes Design Excellence Award ’23, Deans List ’22.
- **Programming-** Meta Mentee ’20. Google Programming Competition ’17 (3rd Place).

TEACHING && ASSISTANTSHIP

Creative Programming And Electronics. UC Berkeley, CA. Summer 2023
Cloud Computing. Ashesi, GH. Spring 2022
Intermediate Programming. Ashesi, GH. Spring 2022
Human Computer Interaction. Ashesi, GH. Fall 2022
Programming With Python. Ashesi, GH. Fall 2022

PROFESSIONAL EXPERIENCE

Lead UI Engineer - Ashesi, GH Jul 2021 - Aug 2022

- Led the design of the first ever Afrocentric progressive Learning Management System for sub-Saharan African youth, funded by MasterCard for a user base of 3 million with **accessibility** features.
- Designed and built multiple web based in-house apps used by the university population which increased administrative performance by over 400% with tools such as **React.js, HTML5**, **RESTful APIs** and **Figma**.
- Organized **design sprints** and **UX mentorship** sessions for students interested in solving campus related problems which led to the design of a campus delivery system.

Unity Software Engineer - KnackApp, CA Oct 2019 - Jan 2021

- Developed robust games with **Unity** and **C#** for 12,000 diverse users to find their hidden genius and unique skills to help with their career paths.
- Designed a download-on-demand feature where people with low internet access could still use the app seamlessly with local encryption synced with the web.
- Optimized the performance of existing software which led to a 200% increase in their user base. This resulted in a partnership with the Indian Government in 2020.

Software Engineering Apprenticeship -Meta (Formally, Facebook), CA. Jul 2020 - Oct 2020

- Used data structures such as **maps, trees** and **linked lists** to write algorithms for software problems with focus on space and time complexity tradeoffs to enhance algorithm speeds.
- Conducted weekly sessions with cross functional teams of engineers, designers and researchers to discuss best industry practices tied to pipeline strategies.
- Worked with a mentor to improved my interpersonal skills such as active listening, leadership and responsibility.

PROJECTS

Designing Technologies For Underrepresented Communities - UC Berkeley, CA. Jul 2023 - Present

- Conducted experiments through **strategic foresight** to investigate and promote the adoption of consumer technologies in West Africa based on cultural heritage and indigenous design philosophies.
- Conducted research studies into pre-colonial West African Designs which led to a new design framework called **AfroTechnoHistory**. (Yet to be published.)
- Validated the framework by designing prototypes with the STEEP foresight framework and tested various assumptions with 25 participants. Found insights into how elements of cultural heritage and traditional beliefs influenced relationships with consumer technologies. This research was exhibited at the Jacobs institute of Design in 2023.

Dynamic Tangible Interfaces (DTIs) Exploration - UC Berkeley, CA Jul 2022 - Oct 2022

- Designed and prototyped disappearing input and display systems using **pneumatics** and soft silicon technologies with **c++.**
- Conducted usability research heuristics on the different functionalities of DTI interfaces. This provided insights into use cases of the technology; for eg, instances where accurate and precision feedback is needed. Another use case is maintaining a tactile feedback in instances where heuristics such as consistency and standards are high. This was exhibited at the Jacobs Institute of Design Winter Showcase.

Protecting User Privacy in IoT Systems - Ashesi, GH Sep 2019 - June 2021

- Designed and conducted research on an end-to-end consumer **IoT** system to protect user privacy in accordance with GDPR laws in 2021.
- Used tools such as **Java, Python** and **C++** to develop an OBD module, a mobile app, a web server, a custom **AI** model built from scratch as a web dashboard for the entire research.
- Conducted research on the software system to find optimal locations for implementing a privacy-by-design mechanism to better secure user privacy in the system.
- This led to insights such as adopting an approach to protect users data even before it gets to the mobile phone from the sensors on the smart devices. This won the Best Computer Science Thesis Award 2021