

ALBERT S. HODO

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SUMMARY

I enhance human experiences, through experimental design and research, based on attributes found in nature. I use a blend of software and hardware to prompt people to reconsider humanities place on this earth. Taking an approach of questioning larger systems at play, I present ideas as more palpable and practical.

EDUCATION

University of California, Berkeley
Ashesi University

Master of Design (College of Engineering)
Bachelor of Computer Science

SKILLS

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

- **Design-** MDes Distinguished Scholar Award '23. MDes Design Excellence Award '23.
 - **Programming-** Meta (Formally, Facebook) Mentee '20. Google Programming Competition '17 (3rd Place).
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TEACHING ASSISTANTSHIP

Creative Programming And Electronics. Summer '23
Cloud Computing. Spring '22
Intermediate Programming. Spring '22
Human Computer Interaction. Fall '22
Programming With Python. Fall '22

UC Berkeley, CA
Ashesi, GH
Ashesi, GH
Ashesi, GH
Ashesi, GH

PROFESSIONAL EXPERIENCE

Lead UI Engineer

Ashesi, GH

- 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

- 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

- 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.
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PROJECTS

Designing Technologies For Underrepresented Communities

UC Berkeley, CA

- 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

- 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. Audience Choice Award 2023, Jacobs Institute of Design Showcase.

Protecting User Privacy in IoT Systems

Ashesi, GH

- 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