



ARTIFACT
ALLIANCE

ANCIENT VISION

UNEARTH SMARTER



ARTIFACT
ALLIANCE

ARTIFACTS:

POTS AND OTHER FULL RELICS



FLAKES



95%

OF ARTIFACTS



ARTIFACT
ALLIANCE

LABELING

IDENTIFY

16-SL-163



1. STATE
2. SITE NUMBER
3. ARTIFACT IDENTIFICATION



A SINGLE SITE



25,000

ARTIFACTS



ARTIFACT
ALLIANCE

RESEARCH

IDENTIFY

ONLINE & VISITS

- Penn Museum
- Historic Wicoff House
- City of Alexandria Virginia
- Society for American Archaeology
- U.S. Bureau of Labor Statistics

PENN MUSEUM

REACHOUT

Professor Silber
Professor Di Giovine

Professor Xin Wu

Dr. Will Tierney





ARTIFACT
ALLIANCE

RESEARCH

IDENTIFY

SMART
GOGGLES



WEATHER
TOOLS



MAPPING
SYSTEMS



AND MORE...



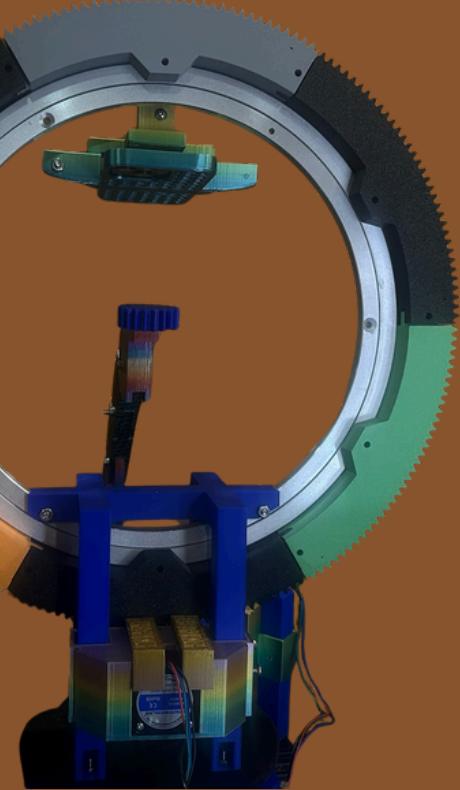
WCU
WEST CHESTER
UNIVERSITY

HOLE
SCANNING
SYSTEMS

ANCIENT
VISION

PIVOT POINT

ANCIENT
VISION





ARTIFACT
ALLIANCE

IDENTIFY

PROBLEM

POST-EXCAVATION PAPERWORK AND ARTIFACT LABELING

2 HR

EXCAVATION



5 HRS

LAB WORK

(GRANT, J., GORIN, S., & FLEMING, N. (2008). THE ARCHAEOLOGY COURSEBOOK:
AN INTRODUCTION TO THEMES, SITES, METHODS AND SKILLS. ROUTLEDGE, P. 32.)

51,000

(U.S. BUREAU OF LABOR STATISTICS)

AFFECTED ARCHAEOLOGISTS
IN THE U.S. ALONE



ARTIFACT
ALLIANCE

PLANNING

IDENTIFY



RESEARCH



WEATHER
TOOLS

AND MORE...

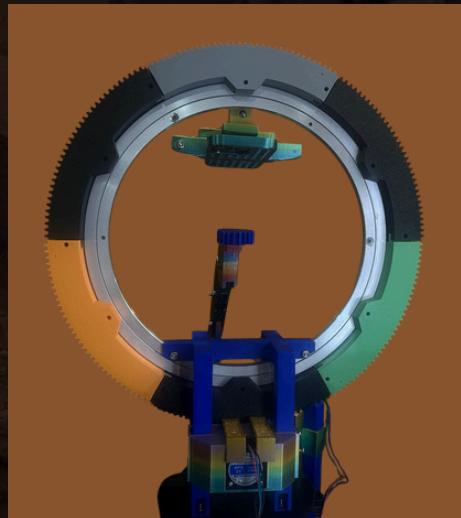
BRAINSTORM



BUILD, TEST,
FEEDBACK, IMPROVE



DEFINE



ANCIENT
VISION

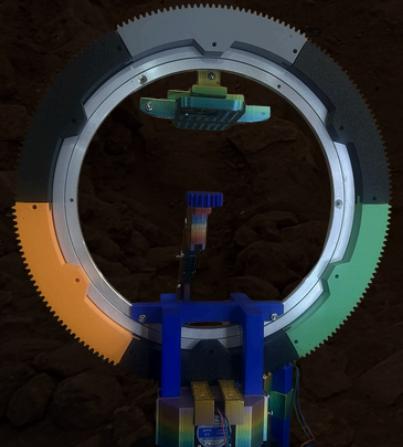




ARTIFACT
ALLIANCE

TEAMWORK

IDENTIFY





ARTIFACT
ALLIANCE

DESIGN

INTRODUCING

ANCIENT VISION

UNEARTH SMARTER



ARTIFACT
ALLIANCE

OUR SOLUTION

DESIGN





INNOVATION

EXISTING SCANNERS



Artec Micro II

- no database
- no dedicated mobile app
- very costly

Scanner / Feature	Price	Database	App	Metadata
Ancient Vision	~565-765	Local database	iPhone app	Labels and 3D profiles
Creality CR-Scan Ferret	\$359	None	None	3D profiles
Revopoint MetroX	\$999	None	None	3D profiles
EinScan Rigil	\$4,999	None	None	3D profiles
3DMakerPro Moose	\$454	None	None	3D profiles
Artec Micro II	\$24,240	None	None	3D profiles
Reference		https://store.3dmakerpro.com/?srsltid=AfmBOopfnuGv4ihPj6iMwEVS0Q2b		

ANCIENT VISION



Our Scanner

- connected database
- convenient mobile app
- much cheaper

\$565

Not including iPhone



ARTIFACT
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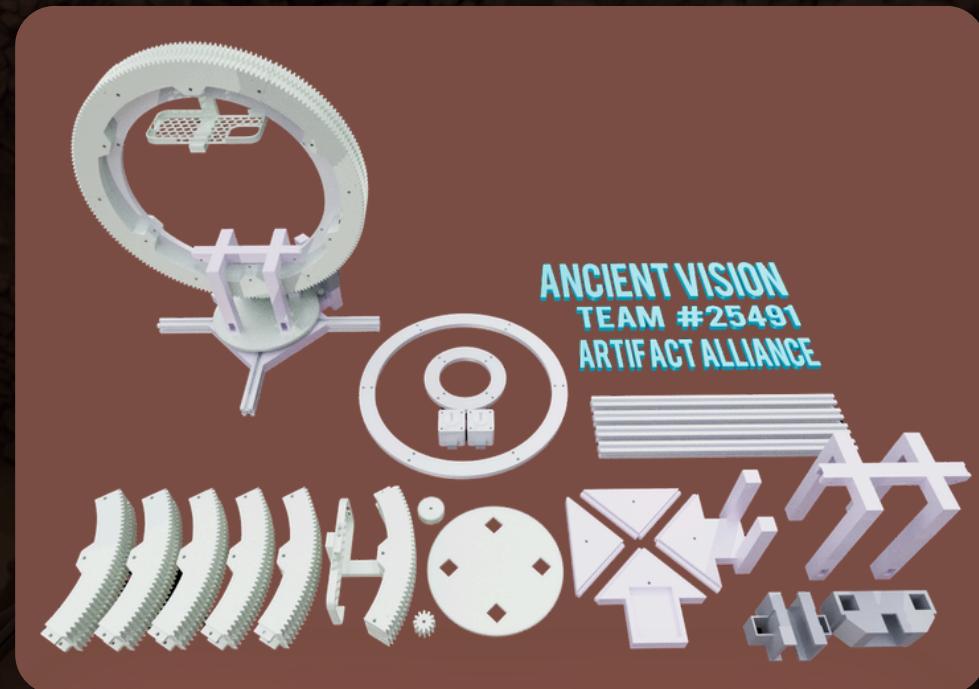
CREATE

COST AND COMPARISON

CHART OF MONEY SPENT

TOTAL PRICE	
Item	Price
6in Lazy Susan	\$14.99
14in Lazy Susan	\$25.99
4x Aluminum extrusions	\$18.99
6in Lazy Susan	\$8.99
Nema 17 Stepper Motor x2	\$29.98
Raspberry Pi Stepper Motor Controller board	\$23.03
Raspberry Pi 5 8GB	\$94.39
PCIE M.2 HAT	\$20.19
Raspberry Pi 5 FAN	\$9.99
64GB M.2 SSD	\$21.99
12v 5A PSU	\$18.99

TOTAL PRICE	
Item	Price
Supporting frame x1	\$30.69
Horizontal Motor Holder x1	\$12.26
Vertical Motor Holder x1	\$4.87
Pole Slice x1	\$20.55
Cased Slice x1	\$12.50
Featureless Slice x2	\$17.14
Featureless Brackets x5	\$133.15
Gears x1	\$14.66
Phone Case x1	\$31.15
Total	\$564.44



\$565

Not including iPhone

\$765

Including iPhone



ARTIFACT
ALLIANCE

TECHNOLOGY

CREATE

SCANNER

LiDAR



Photogrammetry



APP



Coded in Swift



APP

DATABASE



Python



Raspberry Pi



APP



ARTIFACT
ALLIANCE

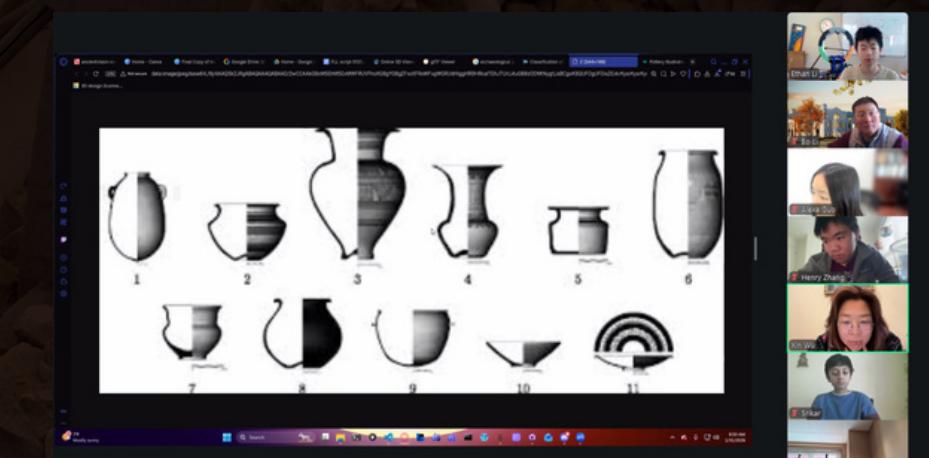
EXPERT FEEDBACK

ITERATE



- Sort info into categories
- Consider field use
- Add GPS encryption

- Align labels with widely used archaeology standards
 - Image matching reliability
 - Data merging systems
 - Durability in the real field



- Focus on a certain type of artifact
- Outline the artifact from a fragment



ARTIFACT
ALLIANCE

ITERATIONS

ITERATE

Versions 1 & 2

- 3D printed
- fragile



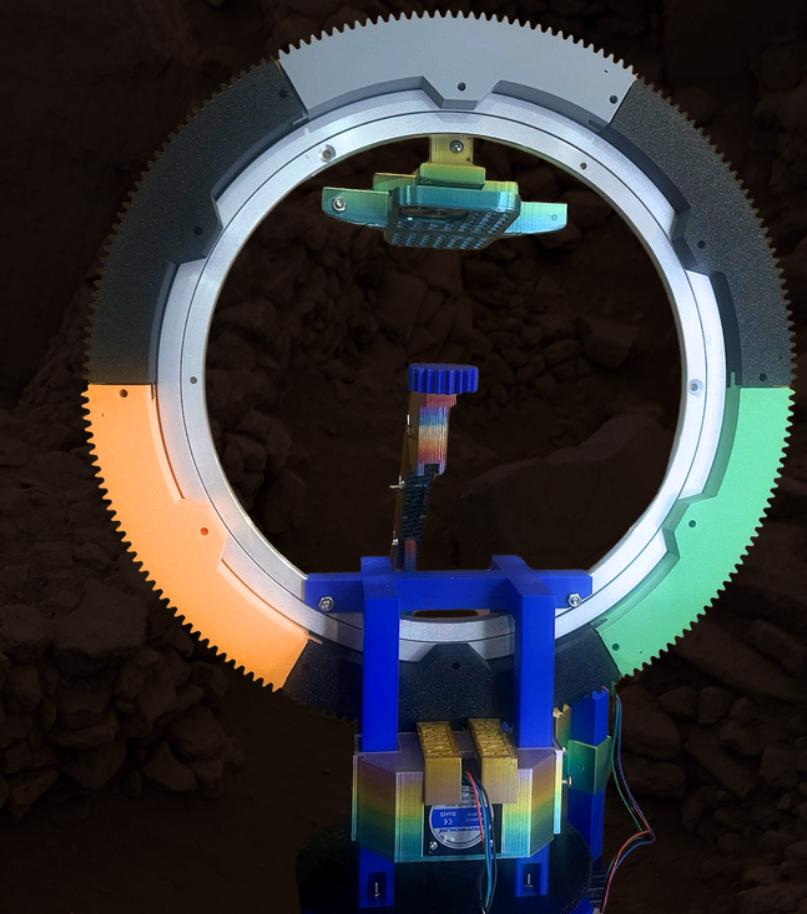
Version 3

- metal frames + 3D printed parts
- stability
- cost efficiency



Version 4

- increased space for wiring and cooling in the motors





ARTIFACT
ALLIANCE

IMPACT

COMMUNICATE

IMPROVED COST AND ACCESSIBILITY FOR

51,000

ARCHAEOLOGISTS
IN THE U.S. ALONE

SIGNIFICANTLY
REDUCED

DATA
ANALYSIS TIME



ARTIFACT
ALLIANCE

COMMUNICATE



RETRIEVE
RESTORE
SORT
SCAN

A large, bold, white sans-serif font displays the five steps of the artifact management process: RETRIEVE, RESTORE, SORT, and SCAN, arranged vertically from bottom to top. The background of the text area is a photograph of a circular metal hatch set into a wall made of rough, irregular stones. Through the hatch, a storage room is visible, containing several stacked green and blue rectangular boxes. The overall composition suggests a connection between the physical storage of artifacts and their digital representation or communication.



ARTIFACT
ALLIANCE

THE FOR THE
FUTURE OF ARCHAEOLOGY

THANK YOU!

UNEARTH SMARTER