


FACULTY
FORUM 2024
InnovateEDU:
Exploring the Future
of Learning at BU

 Digital Learning & Innovation

EQUITY IN ANATOMY EDUCATION: OVERCOMING BARRIERS THROUGH DIGITAL CADAVER PRESERVATION AND INCLUSIVE PEDAGOGY

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BE INSPIRED BY NEW IDEAS.

ACKNOWLEDGEMENTS

We thank and honor the body donors, without which, none of this research would be possible.

We honor the Arapahoe and Massachusett people—past, present, and future—the traditional stewards of the land this research took place on. We honor the land itself, which remains sacred.

All cadaveric material used in the study was derived from individuals who freely donated their bodies to either Boston University Chobanian & Avedisian School of Medicine or to the State Anatomical Board of Colorado for the purposes of education and research following all policies and guidelines of that organization.

For more information, please contact the either the Anatomical Gifts Program at BU or the Colorado State Anatomical Board.

Shipley Center (grant funding)
Toltech (VH Dissector software support)

MaggieGeorge Foundation (grant funding for plastinates)
Lenovo (hardware donations)

DIGITAL CADAVER PRESERVATION



WHY DOES DCP MATTER?

**Access
& Equity**

**Representation
& Diversity**

**Improve
Educational
Resources**

99 PROBLEMS AND THE PROBLEM IS ALWAYS MONEY...



\$30,000



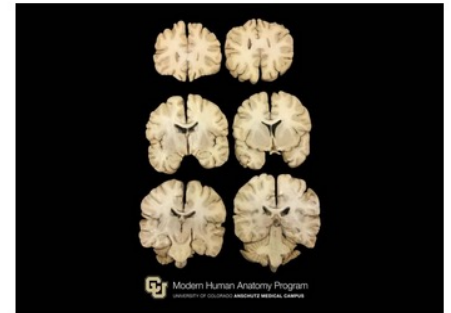
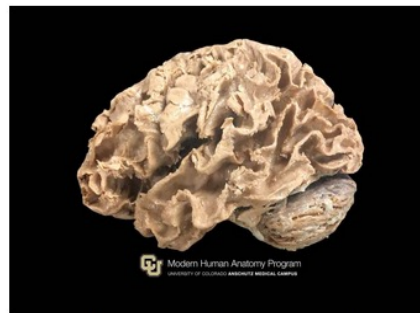
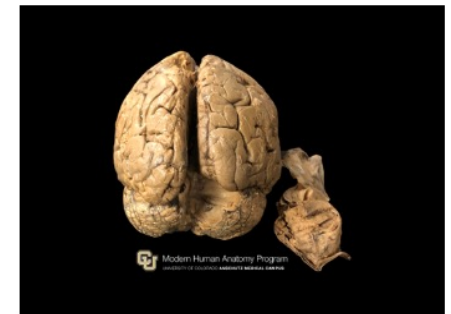
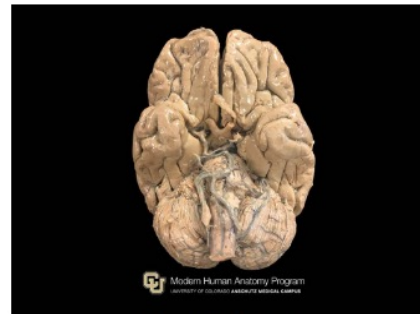
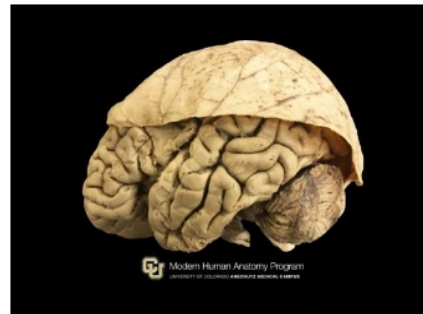
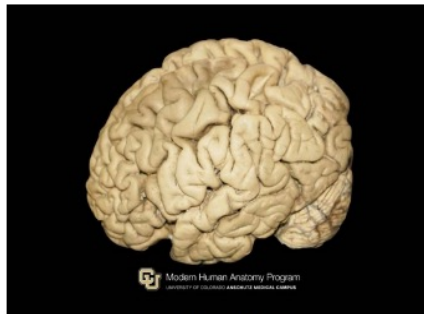
\$1,000

INSTITUTIONAL COLLABORATION



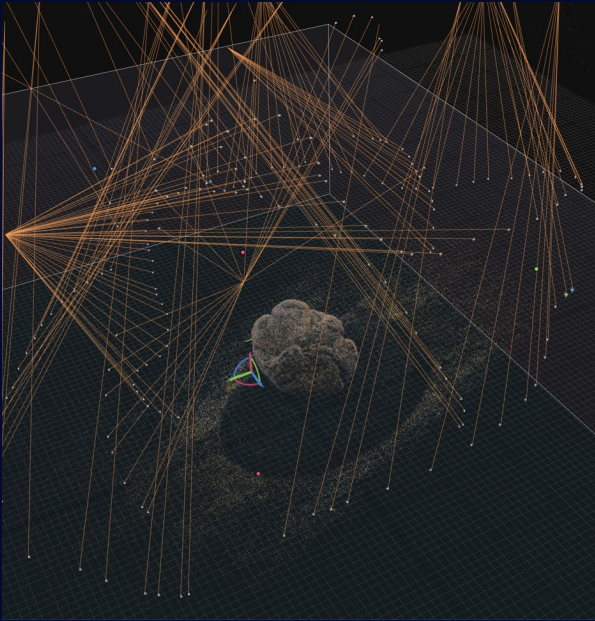
Modern Human
Anatomy Program

UNIVERSITY OF COLORADO
ANSCHUTZ MEDICAL CAMPUS



www.anatomylibrary.org

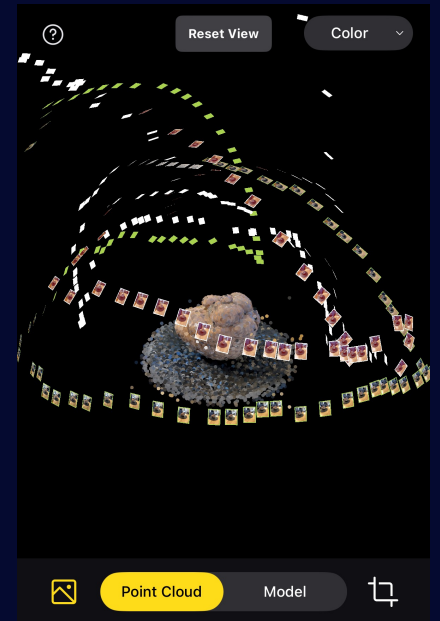
SCAN PROCESSING



RealityCapture



Artec Space Spider

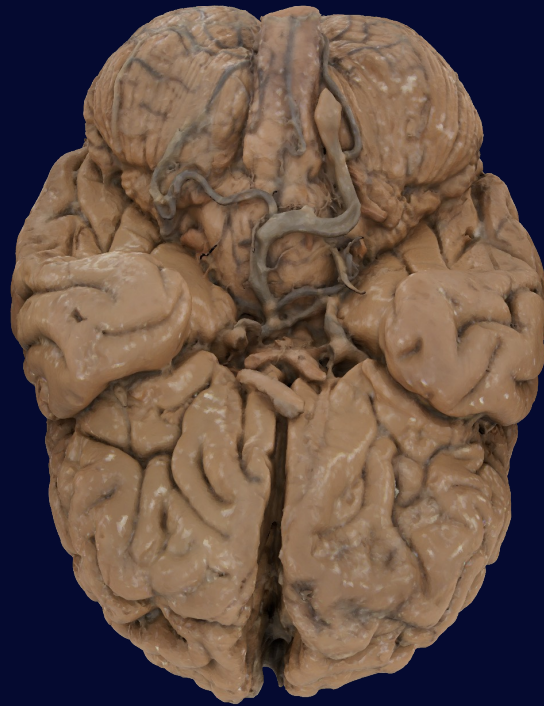


RealityScan

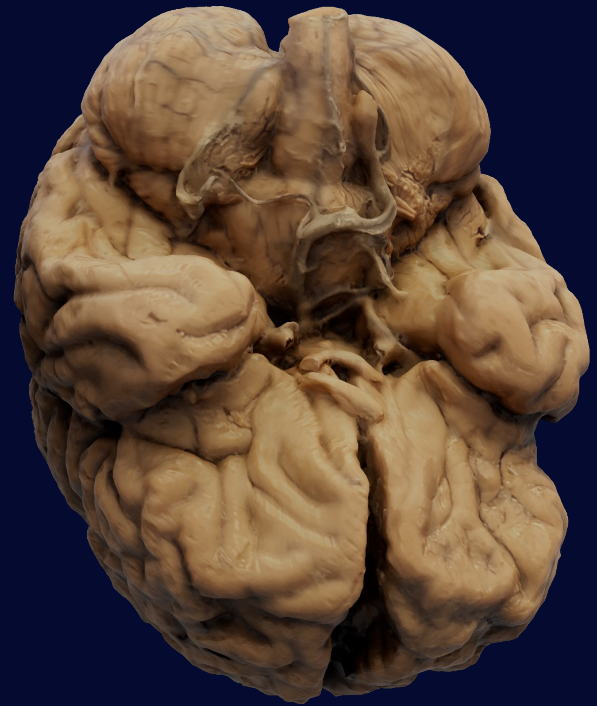
3D MODELS



RealityCapture

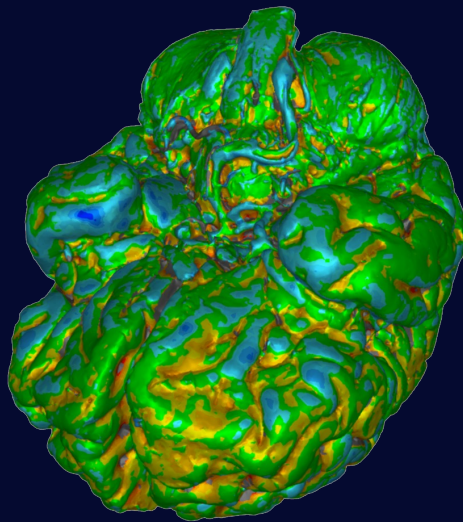
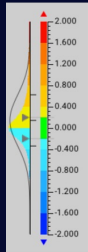


Artec Space Spider



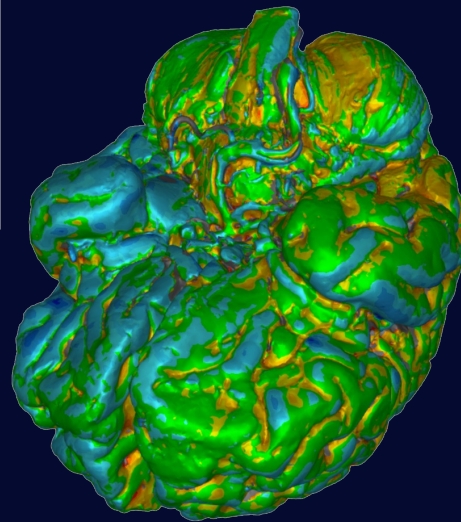
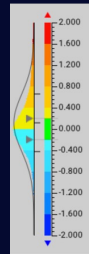
RealityScan

ANALYSIS



Deviation Heat Map
SS to RC

Surface Deviation Analysis	Mean Absolute Distance	Mean Absolute Deviation	Mean Signed Distance	Root Mean Square
Space Spider vs. RealityCapture	0.3344 mm	0.3392 mm	0.1440 mm	0.4810 mm
Space Spider vs. RealityScan	0.4001 mm	0.4023 mm	0.1173 mm	0.5409 mm



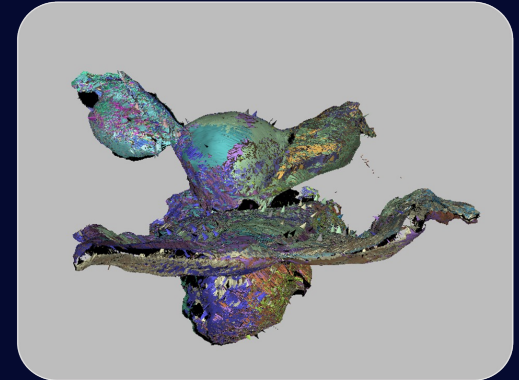
Deviation Heat Map
SS to RS

I: PRESERVING DONOR VARIATION

Young donor (30s)

Premenopausal uterus

Gravidity unknown



Highest resolution scan

3D printing and rendering



Colón Reyes K, Hudlow C, [Importance of Updating the Anatomical Catalog Using Modern Methods.](#)

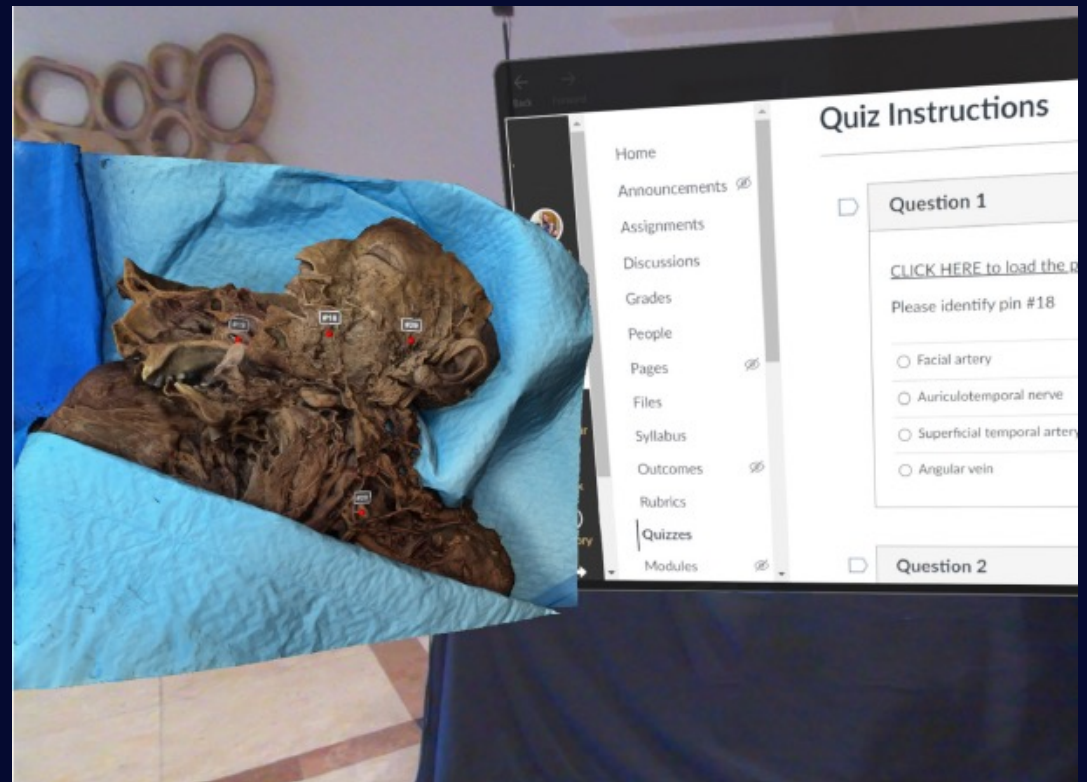
II: TEACHING WITH CADAVERIC ANATOMY

RealityScan

5 min Scanning

30 min cloud processing

Annotated for use in lecture,
formative assessments, and
practice practicals.



III: ARCHIVING ANATOMICAL RESOURCES

Photographs are typically used to preserve lab exams.

DCP can preserve these resources for use in lecture, self study, & remediation.

Open education resources can help programs without anatomy labs.

