Arthur C. Weinstock IV

Research Fellow
Department of Earth, Geographic, and Climate Sciences
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Education

University of Massachusetts Amherst (*2019 – 2022*)

- Dual degree graduate, B.S. Geology & B.A. Economics
- Cumulative GPA: 3.25, Dean's List Honors Spring 2021
- Member of the Geosciences Department Committee for Diversity, Equity, and Inclusion.
    - Fall 2022 – Present

Employment

Research Fellow - University of Massachusetts | Massachusetts DEP (*2022 – Present*)

- Research fellow working under grant from Department of Environmental Protection
- Field equipment calibration, map creation, and data processing in a variety of ongoing University and Lithium Solutions consortium projects
    - Create maps using ArcGISPro and plots using MATLAB
- Led environmental tracer study for the town of South Hadley to determine CT River infiltration of Dry Brook aquifer
- Provide technical support to lab group with IT and geological expertise
- Contribute to greater understanding of global lithium brines and sustainable extraction

Geological Consultant – JMR GeoSolutions (*2023 - Present*)

- Consultant for small woman-owned geotechnical consulting firm
- Produce maps using ArcGISPro and process field data related to spill analytes and other geochemical measurements
- Firm focused on gold exploration and extraction in Chile, and environmental remediation in Alaska
- Provide geological expertise as needed in the field

Substitute Teacher – Amherst Regional Public Schools, Barnstable Public Schools (*2021-2023*)

- Seasonal substitute teacher
- Barnstable High/Intermediate School & Amherst High/Middle School
- Worked primarily with ESL & specialized behavioral students
    - Successful instructor and conflict mediator

Coursework, Research, and Field Experience

Igneous & Metamorphic Petrology
Geochemistry
Sedimentology
Structural Geology
Soils
Hydrogeology
Geographic Information Systems (ArcGISPro)
Earth History
Invertebrate Micropaleontology
Tectonics

Intermediate Micro/Macro Theory
Statistics for Resource Economists
Calculus I & II
General Chemistry I & II
General Physics I & II
Marxian Economics
Environmental Political Economy
Money & Banking
Finance & Society
Mineralogy

Field Courses: Structural Geology, Field Mapping, Geological Field Methods.

Research Experience:

- Postgraduate RA – Structural Geology & Tectonics Group (*2022 – Present*)
    - Assist principal investigator (Professor Michael Williams) in study of the lower gorge of the Grand Canyon
    - Illustrate thin sections and process full slides for analysis
    - Use SEM and Ultrachron (Cameca Instruments) probing techniques for chemical and radiometric analysis to understand P-T-t paths of samples
    - Use data to describe tectonic evolution of the lower gorge with Adobe Illustrator and Photoshop

Field Experience:

- Geological Mapping – Undergraduate Field Mapping (*Fall 2021*)
    - Utilized Brunton and Jake Staff techniques to map bedrock in Western MA
    - Created outcrop geological maps with field strike/dip annotations
    - Reconstructed faults and folds using data collected in the field
    - Contributed to greater understanding of Western Mass geology in the form of open-file report (completed cross section of outcrop geology and field map)
- Alaska – Kachemak Bay EPSCoR Coastal Margins (*Summer 2023*)
    - Water sampling and discharge measurement
    - Field data used in product of five-year study on glacier contribution to global sea-level rise from Kachemak Bay
    - Collect and process data on Radon contribution to watershed using RAD7
- State Water Level Reporting – USGS New England Water Science Center (*Fall 2023-*)
    - Collect monthly data on Western MA water level and well depth for USGS observation wells
    - Data used in national USGS publications on water level changes

Skills

- Figure design and creation in OriginPro, Adobe Illustrator, MATLAB, and Python
- Field and computer-based mapping skills (ArcGISPro, Google Earth, Brunton techniques)
- MOVE construction software for deconstructing faults
- Lab experience for structural and hydrogeologic labs
- Etiquette in laboratory cleaning, safety, and waste disposal
- Durridge RAD7 and associated CAPTURE software for radon and thoron measurements
- Leadership from management experience, sports, academia, and other group activities
- Microsoft products (Excel, Word, SharePoint, OneDrive, PowerPoint)
- Communication and public speaking skills from academic experience and teaching at the middle and high school levels
- Latin reading and writing, beginner Italian
- Outdoor and survival skills from field experience in undergrad as well as in scouting

Honors and Awards

- Departmental Service Award – Earth, Geographic, and Climate Sciences (*2023*)
- Eagle Scout (*2019*)

Volunteering & Community Service

- Letters to a Pre-Scientist (*Fall 2023*-)
    - Participated in national organization that encourages, informs, and broadens awareness of STEM fields and career pathways
    - Connect one-on-one with middle school aged "Pre-Scientist" as a pen-pal
    - Develop connection with pre-scientist and encourage them to enter a STEM field through personal scientific experiences