

Miu Lun (Andy) Lau, PhD

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EXECUTIVE SUMMARY | Active DoD Secret

Expert in Machine Learning and Multi-Agent systems. Skilled in applying ML to enhance the analysis of complex physical in operational analysis. Passionate about creating impactful tools and intelligent AI-driven solutions.

PROFESSIONAL EXPERIENCE

BAE Systems, Inc. | Held DoD Secret

Arlington, VA

Sr. Scientist, APEX | FAST Lab

09/2023 – Present

- Algorithm lead for AFRL Complexity Modeling in Multiple Domains (Commands) and Advanced Complexity Metric Evaluation (ACME) |
- Software engineer for AFRL Rapidly Distributed Air Operations Center (RDAOC) | Battle Management for AI (BMAI)
- Algorithm and software lead for three internal IRAD program

Boise State University

Boise, ID

Research Assistant

08/2018 – 09/2023

- Research and developed *Neo* software package which optimizes *in-situ* EXAFS data, enable speedup of **10x** and ability to interpret noisy real world data
- Lead developer on *Neo* software package, applied to Nano-Indentation, XES, and astronomy data
- Collaborated with Idaho National Laboratory to developed thermoelectric digital twin multiphysics model of thermoelectric and heat-exchanger module using *MooseFramework*
- Advised three interns in both Idaho National Laboratory and Boise State University
- Presented at **10** technical conferences in Material Science and Computer Science

SELECTED PUBLICATIONS (>20 TOTAL PUBLICATIONS, >300 CITATIONS)

- M. Lau, et al., *Chemical Engineering Journal* (2024) | Combining direct ink writing with reactive melt infiltration to create architected thermoelectric legs
- M. Lau, et al., *Chemical Engineering Science* (2023) | Adsorption and Mechanical Study of 13X Zeolite
- M. Lau, et al., *Applied Surface Science* (2023) | AI based analysis of nanoindentation load-displacement
- M. Lau, et al., *Journal of Vacuum Science and Technology A* (2023) | AI used to address reproducibility challenges in materials characterization? | **Editor's Choice** | Feature Article
- M. Lau, et al., *Journal of Materials Research* (2022) | Ion irradiation of amorphous TiO₂ nanotubes
- M. Lau, et al., *Applied Surface Science* (2021) | Analysis of extended X-ray absorption fine structure (EXAFS) data using AI techniques

EDUCATION

Boise State University

Boise, ID

PhD, Computing, Emphasis on Computational Science and Engineering

12/2023

Boise State University

Boise, ID

Bachelor of Science, Mechanical Engineering

05/2018

TECHNICAL SKILLS AND ADDITIONAL INFORMATION

- **Expert:** Python | Excel/PowerPoint/Word/SharePoint | | LaTeX | Git
- **Proficient:** Matlab | C++ | C | | Paraview | Solidwork | PyTorch & TensorFlow
- **Currently Upskilling:** CUDA | Java | C++ | Docker | Java | ImageJ
- **Interests:** Personal Finance & Investing | Robotics | Machine Learning & Deep Learning
- **Hobbies:** Running | Cooking | Camping | Drone