Sandesh Risal

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SUMMARY

Focused Research Assistant pursuing PhD in Mechanical Engineering. Detail-oriented and adept at collecting, analyzing, and synthesizing data from variety of sources. Successful in contributing to peer-reviewed articles and publications exploring Machine learning on High entropy alloys.

EXPERIENCE

Research Assistant
University of Houston | Houston, TX | January 2019 – Current

- ✓ Conduct Molecular Dynamics (MD) simulation for metals and Alloys.
- ✓ Density Functional Theory (DFT) simulations for interatomic potential development using VASP.
- ✓ Run simulations using batch script on Clusters (Sabine and Opuntia clusters of UH).
- ✓ Analyze Data of Alloys using different libraries of python (SciPy, NumPy, pandas, etc.).
- ✓ Machine learning, using different kinds of algorithms (in python) for Metals and Alloys.

Teaching Assistant
University of Houston | Houston, TX | January 2019 – Current

- ✓ Prepare lesson materials and visual aids to reinforce lesson concepts for Manufacturing courses.
- ✓ Teach the use of CNC machines, 3D-printers, PLC devices, etc.
- ✓ Demonstrate of different Material Testing Instruments and Devices: Tensile test, Brinell Hardness Test, Rockwell Hardness Test.

SKILLS

- ✓ Programming languages: C, C++, Python, MATLAB
- ✓ Molecular dynamics Simulations (LAMMPS)
- ✓ Machine Learning (Python and MATLAB)
- ✓ Linux O.S.
- ✓ Cluster Computing
- ✓ DFT Simulations (VASP)

EDUCATION

Ph.D.
Mechanical Engineering
University of Houston, Houston, TX
Expected in December 2025

Bachelor of Engineering
Mechanical Engineering
Pulchowk Campus, Tribhuvan University,
Lalitpur, Nepal
October 2018

CERTIFICATION

- ✓ Participation on 1st Online VASP Workshop (1 week)
- ✓ Successful Completion of Machine Learning Course from Coursera