

Mohammad Rahmeh

LinkedIn | GitHub
moerahmeh95@hotmail.com | +962 775 064 957

SKILLS

PROGRAMMING

Python | Jupyter Notebook
Octave/MATLAB | Java
SQL | JavaScript (D3.js)
R

MACHINE LEARNING

Scikit-learn | Keras | TensorFlow | PyTorch
Regression
Support Vector Machines
Naive Bayes
K-Means Clustering
Principal Component Analyses
Decision Trees
Machine Learning System Design
Natural Language Processing
Neural Networks and Deep Learning
Convolutional Neural Networks
Generative adversarial network

SOFTWARE

Red Hat | Ubuntu | Windows
Microsoft Office | Texmaker
AWS | Microsoft Azure
Git and Github
MySQL

EDUCATION

MS, ADVANCED MATERIALS

UNIVERSITY OF NOTTINGHAM

2017 - 2018 | Nottingham, UK

Graduated with Distinction

Thesis: Implementation of representative directions in a numerical model for the Mullins effect in the multiaxial deformation of elastomers

BS, PHYSICS

AMERICAN UNIVERSITY OF BEIRUT

2013 - 2017 | Beirut, Lebanon

3.2 / 4.0 final GPA

IB

BAHRAIN HIGH SCHOOL

2011 - 2013 | Manama, Bahrain

Higher Levels: Maths, Physics, Arabic
36 / 45

WORK EXPERIENCE

UNIVERSITY OF ROCHESTER 2018 – current | Amman, Jordan

- Worked with the Turbulence and Complex Flow Group, in collaboration with the American University of Beirut as a research assistant.
- Helped with processing, interpreting and preparing massive satellite data sets using Python (xarray and GeoPandas).
- Helped visualise ocean currents using CMEMS satellite data and Python (MayaVi and Matplotlib).
- Calculated vorticity of ocean currents to visualise ocean eddy currents.
- Worked on algorithm development for analysing nonlinear processes and complex flow in the ocean.
- Used the University of Rochester's Bluehive Linux cluster to develop and train neural networks to predict high vorticity regions in the Gulf Stream Region.
- Worked on writing scientific reports as well as interactive computing notebooks using Jupyter.

RESEARCH EXPERIENCE

UNIVERSITY OF NOTTINGHAM 2017 – 2018 | Nottingham, UK

- Implementation of representative directions in a numerical model for the Mullins effect in the multiaxial deformation of elastomers (MSc. thesis)
- Use of scanning electron microscopy and X-ray diffraction to study the structure, composition, and failure mechanism of a brass sample.
- Critical assessment of the current and future use of additive manufacturing and 3D-printing in the pharmaceutical industry.
- Literature review of plasma surface modification of bio-medical polymers in relation to cell-material interactions.
- A large number of case studies about various additive manufacturing and surface and bulk modification techniques in relation to materials science and bio-materials.

AMERICAN UNIVERSITY OF BEIRUT 2013 – 2017 | Beirut, Lebanon

- Experimentally studying the black-body behaviour of a tungsten lamp and comparing it to the theoretical Planck curve of a perfect black-body
- Numerically modelled the dispersion relations of cubic monatomic and diatomic lattices in order to derive the density of states and specific heat of the lattices
- Determining the thermal properties of n-type Si semiconductors doped in phosphorus, using various techniques such as Debye's method and Fermi-Dirac statistics.
- Building a hierarchical Bayesian model of brain activity by deriving the Gibbs sampler and implementing it.
- Extracting the phase angle of a given material using experimental spectral reflectance data and the Kramers-Kronig relations, with the help of Matlab.

ONLINE CERTIFICATIONS

Introduction to Machine Learning | **Udacity**

Convolutional Neural Networks (CS231n) | **Stanford University**

Deep Learning Specialization | **deeplearning.ai**