Mohit Israni

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EDUCATIONAL BACKGROUND

Master of Science in Computers and Information Science and Engineering May 2018
Master of Science in Materials Science and Engineering
Graduate Certificate in Scientific Computing
University of Florida, Gainesville, GPA: *3.82 / 4*
Relevant Coursework: Algorithm Analysis, Data Science & Mining, Distributed Systems ,High Performance Computing, Database Management Systems, Statistical Methods in Research I and II, Computer Network

Bachelor of Technology in Metallurgical and Materials Engineering May 2015
National Institute of Technology(VNIT), Nagpur, India, GPA: *8 / 10*

TECHNICAL SKILLS

Programming Languages Java(Intermediate) · Elixir(Experienced) · Python(Experienced) · C/C++ · JavaScript · HTML/CSS · SQL

Computational Technologies VASP · VESTA · Open-MPI · VIM · Git · R Language · MATLAB

PROJECTS

Predict Closed Questions on StackOverflow (Python) | UF CAP5771 Nov 2017 – Dec 2017
- Analyzed multiple data science classifiers to predict whether a question posted by a user on Stack Overflow will be closed or if so providing an explanation or determining why the reason that the question was closed.
- Preprocessed 4 million records to remodel the as-given features to traits of users and topical features of the questions.
- Evaluated the goodness of classifier models using the multiclass logarithmic loss function, accuracy, and confusion matrix.

Age-Invariant Face Recognition (Python) | UF CIS6930 Nov 2017 – Dec 2017
- Created binary classifiers, linear, k-nearest neighbors, neural network and support vector machine (SVM) classifiers to predict whether two given age invariant images belong to the same person or not.
- Produced LBP (Local Binary Pattern) and HOG (Histogram of Oriented Gradients) features on extraction from Cross-Age Celebrity Dataset (CACD) that was used to generate the classifier models.

Pastry Protocol Implementation using Functional Language (ELIXIR) | UF COP5615 |120/100 Oct 2017 – Oct 2017
- Implemented a distributed object location and logarithmic efficiency routing substrate for peer-to-peer applications.
- Introduced global storage/routing using distributed hash tables based on key matching on an expanded overlay network of nodes (10,000).
- Also, implemented pastry failure handling; works even on a connection failure of up to 80% of nodes.
- SIMILAR PROJECT: Gossip Simulator on a Distributed Network (ELIXIR) | UF COP5615 | 130/100

Bitcoin Mining using (ELIXIR) | UF COP5615 |100/100 Aug 2017 – Sep 2017
- Generated Bitcoins by mining with Actor model concept. Used SHA-256 as hashing function for bitcoin mining.
- Gained efficiency by distributing work from server computer to multiple clients (computers) upon request.
- Every client, in turn, accelerated mining by dividing and allocating work to several worker threads.

Internet chat room application implementation (JAVA) | UF CNT5106C Nov 2016 – Dec2016
- Delivered a multi-user chat application using multithreading and socket programming.
- Improved functionality by providing users with options to unicast, broadcast, block-cast texts and files via the server

SCIENTIFIC COMPUTING

Density Functional Theory(DFT) Prediction and Characterization of 2D Chalcogenides Apr 2016 – Present
Research | Advisor: Dr. Richard Hennig | VASP(DFT), VESTA, Python, MATLAB
- Streamlined high-throughput DFT calculations by automation using an open source Python library for materials analysis.
- Discovered novel 2D structures by performing DFT calculations using Hybrid exchange-correlation functional.
- Generated plots, charts and other data representation schemes using Matplotlib, a Python 2D plotting library.

Performance Comparison of Parallelized Algorithms (C, Open-MPI) | UF CIS6930 Nov 2016 – Dec 2016
- Maximized processing speed by systematically distributing a pool of 10 million numbers of data among user defined number of processors on University Supercomputer (HiperGator2).
- Achieved parallel programming using Open-MPI to execute instruction simultaneously on processors to analyze performance variance for parallel quick, merge and radix sort algorithms.

POSTER PRESENTATIONS / LEADERSHIP

Event Director of Indian Graduate Student Association (IGSA) at University of Florida (UF) Jan 2016 – Feb 2017
- Planned and organized cultural, social events and conventions throughout the year
- Expanded medium of networking for graduate students and alumni.

Part of Institute for Pure and Applied Mathematics(IPAM), UCLA Workshop 2017 Oct 2017 – Oct 2017
- A week-long discussions and seminars on Optimization & Optimal Control for Complex Energy and Property Landscapes.

Poster Presentation at the International Conference, Electronic Materials and Applications (EMA) 2017 Feb 2017 – Feb 2017
- On "DFT Prediction and Characterization of Two-Dimensional Group-III Chalcogenides.