DEEPIKA VADLAMUDI

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SUMMARY

- Recent graduate with 2 years Professional experience looking for opportunities in the field of Computer Science.
- Actively involved all phases of project lifecycle including building data pipelines, visualizing, modeling, testing, and deployment.
- Experienced in working with machine learning algorithms and proficient with developing neural networks such as ANNs, CNNs, RNNs, LSTMs using Keras, TensorFlow, and PyTorch.
- Ability to write well documented, clean, and efficient code for deployment.

EDUCATION

Stevens Institute of Technology, Hoboken, NJ
Master of Science in Computer Science. GPA: 3.83 Dec 2021

Jawaharlal Nehru Technological University College of Engineering, Sultanpur
Bachelor of Technology, Computer Science June 2018

SKILLS

Programming Languages: Python, SQL, R, CUDA, MATLAB, SAS, C, JavaScript, HTML, CSS, Shell scripting
Libraries/Frameworks: AWS Sagemaker, S3, Azure, Lambda, Hadoop, Scikit learn, NumPy, Pandas, Torch, Spark, TensorFlow
Technical Expertise: Algorithms, Machine Learning, Deep Learning, Data Mining, Adversarial Robustness, Recommender Systems, Analytics, Statistics, Optimization techniques

WORK EXPERIENCE

Risk Analyst – ***Amazon***, Hyderabad, India Oct 2019 – Dec 2019

- Investigated suspicious activities and fraud behaviors which could pose a risk to Amazon and its customers
- Designed features helping risk analysts improve monitoring fraudulent orders, saw significant increase in efficiency
- Identified fraudulent patterns, discovered modus operandi, took actions like verifying customers to minimize risk
- Took necessary actions to identify and help minimize Amazon's financial, legal, and reputational risk

Environment: Python, EC2 ,S3

Machine Learning Engineer – *Ridhan Technologies*, Hyderabad, India Oct 2018 – Sep 2019

- Used Sql to retrieve data from cloud; designed a script using JavaScript to plot the data as an ECG graph
- Designed and implemented Deep Neural Nets for anomaly detection in ECG signals
- Leveraged AWS S3, lambda, and Amazon Sagemaker to deploy the model into testing phase before deploying into production

Environment: Python, SQL, JavaScript, DNNs, CNNs, TensorFlow, PyTorch, AWS S3, Lambda, Amazon Sagemaker

Research Intern - *Advanced NUmerical Research and Analysis Group, DRDO*, Hyderabad, India Jan 2018- Nov 2018

- Examined performance of PCA over different data sets
- Created code using MPI to be computationally efficient by running it over multiple processors
- Drafted a detailed report about the project using LaTex which could later be utilized for projects needing PCA as a module

Environment: Linux, MPI, C, Latex

Project Trainee - *Institute of Development and Research in Banking Technology*, Hyderabad, India May 2017 – Jul 2017

- Studied various machine learning and data mining algorithms, Collaborated in research on particle swarm Optimization
- Implemented PCA in MATLAB, experimented for efficiency using various mathematical techniques on large datasets

Environment: MATLAB, Latex

PUBLICATIONS

- Robust Learning of Halfspaces in the presence of Agnostic Noise – A study, implementation, design and analysis of Algorithms - ProQuest Dissertations Publishing, 2021. 28867500 Dec 2021
- V. Ch. Venkaiah and V. S. P. Deepika: A novel self-healing key distribution scheme based on vector space access structure and MDS codes, International Journal of Communication Systems Sep 2019

- Co-authored "Mathematical Essentials", a chapter in the book "Handbook of statistics Vol38 - Computational Analysis and Understanding of Natural Languages: Principles, Methods and Applications" edited by C.R. Rao and Venkat Gudivada, and published by Elsevier Sep 2018

GRADUATE WORK EXPERIENCE

Graduate Teaching Assistant – *Stevens Institute of Technology* Jan 2021 – Jan 2022

- Served as teaching assistant to courses: Deep Learning, Probability and Stochastic Proc., Mathematical Foundations of ML
- Held office hours to clarify concepts, help students with assignments, project ideas and design
- In charge of designing and grading assignments in python and MATLAB, drafted questions for term examinations

ACADEMIC PROJECTS

Robust Learning of Halfspaces with Agnostic Noise

- Developed efficient algorithms to robustly learn halfspaces in presence of agnostic noise improving performance from exponential to polynomial time complexity
- Leveraged basic mathematical techniques such as SVD and gradient descent to achieve better computational complexity

Parallel Implementation of CNN for Image Classification using CUDA

- Conducted classification of given image on GPU, leveraged transfer learning, deployed prefetching and streams
- Gained 38x speed than sequential version; program is memory efficient, accomplished 100% occupancy

Plagiarism Detector

- Examined text files and performed binary classification. Labeled it plagiarized or not by comparing it to source text file
- Selected features for comparing similarity between two text files by analyzing correlations between different attributes
- Deployed plagiarism-classification model using Amazon SageMaker

Classification of Pima Indians Diabetes Dataset using AdaBoost with MLE as Base Classifier

- Implemented using MATLAB and Python; leveraged boosting technique to improve accuracy
- Analyzed results by varying different parameters; identified possible improvements

Parallel Implementation of PCA using MPI

- Modified PCA by leveraging different mathematical techniques to achieve higher performance using multiple processors
- Attained 9X higher performance than sequential PCA. Recognized as best project of 2018, JNTU-CS department

ACTIVITIES

- As undergraduate, served as volunteer peer tutor in *Probability and Statistics*, *Algorithms*, *Data Structures,* and *Intro to Machine Learning*
- Elected as core coordinator for both technical and cultural fests at *Jawaharlal Nehru Technological University*