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Employment

Machine Learning, Intern — **Synopsys** — **May 2017- Aug 2017**

Unsupervised Anomaly Detection

- Developed an anomaly detection system for the company's expense data using Machine Learning.
- Used **Kernel Density Estimation** and a **one-class Support Vector Machine** in a hybrid approach that led to achieving an F1 score of 0.87.
- The internal audit team used the system instead of manually analyzing the data.
- **Other project** - Developed python programs to keep track of Cost Center and G/L Accounts mapping changes for BW data conversion to SAP S/4 HANA system

Research Assitant — **University of Massachusetts** — **Jan 2017 – May 2017**

- Worked on an **automatic dietary monitoring system** which classified incoming audio streams from the Bluetooth headset worn by the user into different food categories.
- Used a semi-supervised approach with **Deep Boltzmann Machine** for unsupervised pre-training and a deep feedforward neural network for fine-tuning. We achieved an accuracy of 94% with the DBM-DNN model which outperformed previous systems at the time.

Teaching Assistant — **University of Massachusetts** — **Aug 2017 – Present**

- Created assignments and grade papers for the undergraduate Artificial Intelligence class.

Education

Lowell, MA — **University of Massachusetts Lowell** — **Aug 2016 – May 2018***

- M.S in Computer Science, May 2018*. GPA: 3.5
- Graduate Coursework: Algorithms; Artificial Intelligence; Machine Learning; Big Data System Design; Databases; Human Computer Interaction; Computer and Network Security.

Mysore, India — **Visvesvaraya Technological University** — **Aug 2012 – May 2016**

- B.E in Computer Science, May 2016. GPA: 3.6
- Undergraduate Coursework: Operating Systems; Databases; Algorithms; Programming Languages;Comp. Architecture; Engineering Entrepreneurship.

Technical Experience

Projects

- **Linguistic Diagnostic Toolkit** (2017). An NLP toolkit that will perform quantitative analysis on vector space models through automatic annotation of relations between word vectors on the basis of existing linguistic resources. It will also evaluate the linguistic relationships captured by the VSM by benchmarking them on a set of common NLP downstream tasks such as NER, POS, SRL, Sentiment classification, Relation Extraction etc using neural architectures. Python, Chainer
- **Survey of different techniques for lung cancer nodule candidate generation** (2017). Comparing the effectiveness of Deep Learning architectures like UNet as opposed to traditional computer vision techniques like filtering/ thresholding for the task of proposing candidate regions for the detection of malignant lung cancer nodules in low dose CT scans. Python, Tensorflow
- **Semi supervised Learning with Deep Convolutional Generative Adversarial Networks** (2017). Aims to leverage the representations/features learnt by the discriminator network during the adversarial training process and use them to achieve one/few shot learning in discriminative CNNs in the task of image classification using MNIST and CIFAR 10/100 datasets. Python, Keras, Tensorflow
- **Clinical Concept Classification using Bidirectional Long Short Term Memory Network(LSTM)** (2016). Clinical concept classification system for medical notes in the 2010 I2B2/VA challenge dataset using Bidirectional LSTM with GloVe word embeddings trained on the MIMIC II dataset. Python, Tensorlfow, Keras
- **In-one file manager** (2015-2016). Desktop application that logically aggregates files based on their file extension. It helps to store information regarding file organization in storage media like DVDs, HDDs etc. It reminds the user to backup important documents and photos. It suggests the user to rename vaguely named documents like PDF files, word files etc. Java, JavaFX, SQLite

Additional Experience and Awards

- **Second Prize, CS Dept Project Expo:** Awarded 2nd prize for In-one file manager, out of 35 projects.
- Represented my college(VVCE) at the Aspirations 2020 Programming contest conducted by Infosys.

Skills

- **Lanuages :** C++; C; Java; Python; SQL; PHP
- **Libraries :** Tensorflow; Chainer; Keras; Torch; Scikit-learn; Numpy; Pandas; SQL; MongoDB; MySQL
- **Technologies :** Visual Studio Code; Eclipse; MATLAB; Atom; Pycharm; Git; Tableau

Areas of Interest : Software Development; Machine Learning; Artificial Intelligence; Data Science;