Abhilasha Jha
Final Year Computer Science And Engineering Undergraduate at Vellore Institute of Technology
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EDUCATION

Secondary

Kendriya Vidyalaya, Air Force Station, Jaisalmer

April 2011 - March 2012

Secured overall 10 CGPA in the CBSE AISSE Examination and A1 grade in all the subjects

Higher Secondary

Kendriya Vidyalaya, Andrews Ganj, New Delhi

April 2013 - March 2014

Secured 91.2 % in the CBSE AISSCE Examination.

Graduation

Vellore Institute of Technology, Vellore

July 2015 - July 2019(*Expected*)

Have maintained a CGPA of 8.99

SKILLS

- Sound knowledge of C, C++, and Python.
- Sound experience in developing Machine learning projects using Python.
- Experienced at developing websites using Django

Experience

Interned at the National Informatics Centre(NIC)

May 2017-June 2017

Worked on the National Scholarship portal backend. The internship predominantly consisted of working with Java servlets and JSP.

Interned at Capgemini

May 2018-June 2018

Worked on the facial recognition system to improve ease of authentication of employees at the workplace.

Interned at INNEFU Technologies

May 2018-June 2018

Worked on YOLO darknet (https://github.com/pjreddie/darknet) and modified it to detect intruders with weapons from videos in real time.

Currently working as intern at Avi Networks

Dec 2018-June 2019(Expected)

Learning about Avi's load balancing infrastructure.

Created a Django web app for easy management of customer issues.

ACADEMIC PROJECTS

Turing Machine Simulator

Theory of computation and Compiler design

Fall Semester 2016

- Team Size: 3
- New data structures were devised to simulate the pointer, the infinite tape and for storage of states.
- Available at: https://github.com/trinity652/Turing-machine

Detection of Malicious and Benign Connections in a Network -

Networks and Communication

Winter Semester 2017

- It was an individual project.
- Created a Python tool which detected malicious and benign connections using the Decision Tree algorithm.
- Available at: https://github.com/trinity652/Desicion-tree-Network-Analysis

Energy Efficient Scheduling Of Virtual Machines for Cloud Data Centers

Green and Energy Aware computing

Winter Semester 2017

- Team Size: 3
- Our work focused on visualizing the allocation of virtual machines to the servers as a three-dimensional bin packing problem
- We used Javascript and C++ to simulate the same.

Automated and Smart irrigation system

Internet Of Things

Winter Semester 2017

- It was an individual project.
- Created an automated and self learning irrigation system to analyze the moisture in the soil and take informed decisions like number of equipments to keep switched on at a moment using Principal Component analysis and inform the farmer using Arduino,Matlab and NumPy libraries in Python.
- Available at: https://github.com/trinity652/Irrigation-System

Detection and Classification Of Skin Cancer using SIFT Feature Extraction and Bag of Visual Words

Image Processing

Fall Semester 2017

- It was an individual project.
- Used the ISIC image archive to model and train our machine learning system. OpenCV and SciKit-learn were used to model the system. Our aim was to classify three major types of Skin Cancers:
  Melanoma, Basal Cell Carcinoma and Squamous Cell Carcinoma.
- Language used was Python.
- Available at: https://github.com/trinity652/Skin-Cancer-Classification

Detection of Breast Cancer using Adaptive thresholding and Statistical Feature Extraction and SVM

Neural Networks And Fuzzy Control

Fall Semester 2017

- It was an individual project.
- The tumor containing regions were detected using adaptive thresholding and further information about the mammogram was obtained by extracting statistical features.

- The obtained data were used to train the SVM and later the occurrence of cancer was predicted using the same.
- Available at: https://github.com/trinity652/Breast-Cancer-Detection

Recyclotron: Destination to sell your E-Junk

Web Technologies

Fall Semester 2017

- It was an individual project.
- An E-Waste Buying and Selling website using Mean Stack was created.
- Available at: https://github.com/trinity652/Recyclotron

Modification of Fisher Kernel for Large Scale Image Classification

Content Based Image and Video Retrieval

Winter Semester 2018

- Team Size: 3
- The usual method of classification of images in use is Bag of Features with SVM, in this project we use Fisher Kernel with certain modifications and SVM and measure accuracy.

Detection of Alzheimer's using Image Processing and Deep Learning

Artificial Intelligence

Winter Semester 2018

- It was an individual project.
- It uses sparse autoencoder to build the filters for the images and 3-D convolutional networks for classification.
- Keras, Tensorflow and Theano were used to build the model.

Playing Tetris Using Genetic Algorithms

Machine Learning

Winter Semester 2018

- It was an individual project.
- In this project, the system tries to play Tetris and its performance is consistently improved using genetic algorithms.
- The aim was to obtain an overview of how various optimization algorithms can be applied to NP/NP-Hard problems.
- Project has been coded in Python.

Forecasting trends In Indian Summer Monsoon Rainfall By Varying Architecture of Artificial Neural Networks(ANN)

Technical Answers to Real World Problems

Winter Semester 2018

- It was an individual project.
- The rainfall of the years was viewed as a time series and difference in accuracy is plotted when data from varying time intervals is used.
- The accuracy was also measured for the case when the depth of neural networks is increased.
- Tensorflow and Keras were used to build the model.

Individual Projects

DocAuth: A Web Portal Conducting Document Forgery detection using Image processing and Machine Learning

Created for the Smart India Hackathon 2018 and ongoing

- Team Size: 4
- An online document authentication portal, used to detect morphed images, handwriting forgeries, fake certificates, ID proofs and all the documents issued by the Government on the go.

Scholastic Achievements

- Was awarded the Certificate Of Merit in Winter Semester 2016 for exceptional academic performance (awarded to the ten top-ranking students of a given branch every year).
- Selected for representing VIT at HackTech, the annual CalTech hackathon.

Extra-Curricular Activities

- Had participated in VIT-MUN 2016 and got a Verbal Mention in the very first conference.
- Had participated in VIT- Technical Conference 2016 and got a verbal mention and was termed as “Most Eloquent Delegate” by the Chairperson.
- Was called as a guest speaker on the occasion of “Hindi Diwas 2017” on VIT Community Radio for being a poet and Hindi and Urdu poetry enthusiast.

Position of Responsibility

- Served as the Technical Mentor at the Computer Society of India-VIT due to a keen interest in mentoring younger students and their skill development.
- Served as Organizer, Devspace 2018(http://devspace.tech). Devspace is one of the largest student-organized technical conferences in India.

References

Available upon request.