

Kaushik S Kalmady

Education

- 2015–Present **Bachelors in Computer Science & Engg**, National Institute of Technology Karnataka, CGPA – **9.59**.
2013–2015 **Karnataka Board Class 12**, PoornaPrajna Pre-University College, Udupi, Percentage – **98.00**.
2012–2013 **KSEEB Class 10**, St. Mary's English School, Kannarpady, Udupi, Percentage – **98.08**.

Experience

- Jun-Jul 2017 **Research Intern**, OPTICS AND MICROFLUIDICS INSTRUMENTATION (OMI) LAB, IISc, Bangalore.
○ *Guide:* Dr. Sai Siva Gorthi & Dr. Sai Subramanyam Gorthi
○ *Field of exposure:* Deep Neural Networks, CNNs, Transfer Learning, SVMs, Restricted Boltzmann Machines
○ *Project:*
- Classification of White Blood Cell Images into respective types using Deep Learning methods.
- Implemented various CNN models, investigated the effectiveness of features extracted from various pre-trained Deep Neural Networks and their fine-tuning to obtain high accuracy in classification of Leukemia cell lines.

Selected Projects

- Jan-Apr 2017 **Neural Probabilistic Models for Natural Language Processing**.
○ The Song of Ice and Fire text was used to train a word2vec model and a Seq2seq chatbot in Tensorflow.
○ Distributed representations of words and their syntactic and semantic qualities were investigated.
- Jul 2017 **Restricted Boltzmann Machines for MNIST Digit Classification**.
○ Analyzed efficiency of Latent Features obtained from RBMs for classification as compared to raw image data.
○ Features extracted using scikit-learn in Python were used to train a Deep Belief Network on the MNIST digits data.
- May 2017 **Neural Network based Image Segmentation for Skin Cancer Prediction**.
○ Deep Learning project when the U-net CNN architecture was used to identify tumor cells in an image.
○ Implementation was done using tf-unet package and Keras after preprocessing using numpy and PIL.
- March 2017 **Django OS Scheduling Algorithms Simulator**, Course Project in Operating Systems.
Worked on the serialization, back-end code, data transfer between JS front-end and the Django server for an interactive Web Application demonstrating various OS Scheduling Algorithms based on dynamic user input.
- Jan 2017 **Tetris**, Course Project in Object Oriented Programming.
Designed the classic Tetris game along with the associated GUI using FLTK in C++.
- Aug 2016 **Linkup - a tool to bookmark web links from the command line**.
○ Used python's json, webbrowser modules to build a tool that helped save and load web links topic/subtopic-wise.
○ Json files are created per topic and can be easily shared in human readable format.
- Aug 2016 **Satellite Tracker**.
Worked on simulating real-time data gathering and visualization using Python for an Arduino powered Satellite Tracker. Data was generated using PyEphem library and real time position plotting on the earth's surface was done using Basemap in matplotlib.

Skills

- Languages C/C++, PYTHON, MATLAB, BASH, HTML, CSS, JAVASCRIPT
ML/WebDev PYTHON TENSORFLOW/SKLEARN, PYTHON DJANGO/FLASK

Achievements and Additional Work

- Achievements ○ Top 31 in the country in the National Level Mathematics Olympiad conducted by AMTI in 2014.
○ JEE Main AIR 1089. KVPY Scholar. NTSE State Rank 3.
○ National Champion - TCS Rural IT Quiz.

- Extra ○ Executive Student Member - IEEE-NITK Student Branch
Curricular ○ Treasurer and Executive Member - Literary Stage and Debating Society, NITK
Activities ○ Executive Member and Astro Committee Joint Convener - Amateur Astronomy Club, NITK