Alish Dipani

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EDUCATION

BITS PILANI
BE in Computer Science
Aug 2016 - Dec 2019 | Goa, India
CGPA: 8.03 / 10.0
BITSAT : 384/450 (5th rank on campus)

GRADE XII, MHBSE
Higher Secondary School Certificate Examination
Grad. March 2016| Maharashtra, India
Score : 570/650 (87.7%)

GRADE X, MHBSE
Secondary School Certificate Examination
Grad. March 2014| Maharashtra, India
Score : 446/500 (89.2%)

LINKS

Github:// **alishdipani**
LinkedIn:// **alish-dipani**
Intel DevMesh:// **alish-dipani**

COURSEWORK

ON-CAMPUS
Machine Learning
Artificial Intelligence
Neural Networks
Computer Architecture
Operating Systems
Data structures and Algorithms
Theoretical Neuroscience
Introduction to Cognitive Neuroscience
Object Oriented Programming

SKILLS

PROGRAMMING
Over 5000 lines:
Python • C++ • PyTorch • scikit-learn
Over 1000 lines:
C • TensorFlow • Java • Ruby
Familiar:
OpenCV • MATLAB • ROS

CONCEPTS
Intermediate:
Machine Learning • Deep Learning • Data Science • Bioinformatics
Beginner:
Signal Processing • Image Processing • Neuroscience

EXPERIENCE

TCS INNOVATION LABS, KOLKATA | Research Intern
Feb 2020 – Present | India | **Links: Offer Letter**
Working on Recognising Hand Gestures recorded through a Dynamic Vision Sensor using Spiking Neural Networks on the neuromorphic platform **SpiNNaker**.

INSTITUTE OF MOLECULAR GENETICS AT MONTPELLIER, CNRS | Research Intern (Undergraduate Thesis)
Aug 2019 – Dec 2019 | France | **Links: Team Website**,**Presentation**, **Report**, **Offer Letter**
Worked under the guidance of **Dr. Charles-Henri Lecellier** on the project titled "**Considering DNA topology to investigate Transcription Factor Combinatorics**". The goal of my thesis was to use Machine Learning to predict the cooperation of different Transcription Factors to regulate gene expression while considering the topology of the DNA i.e. 3D Chromatin structure through DNA-DNA interaction.

COGNITIVE SYSTEMS JOURNAL | Reviewer
June – November 2019 | India | **Links: Certificate**, **Journal**
Reviewed three papers for Cognitive Systems Journal.

GOOGLE SUMMER OF CODE 2019 | Summer Intern
May 2019 – Aug 2019 | India | **Links: Project**, **Github Repo**, **Proposal**, **Final Blog**
Worked with **Ruby Science Foundation** on adding Magick backend and new functionalities to the library **RubyPlot**: An advanced plotting library for Ruby.

BITS PILANI | Teaching Assistant
August 2018 – May 2019 | Goa, India | **Links: CS F213**, **CS F407**
Teaching Assistant for the courses Object Oriented Programming (CS F213) [Aug - Dec 2018] and Artificial Intelligence (CS F407) [Jan 2019 - May 2019]

GRANTS

INTEL EARLY INNOVATION FUNDING (In Progress)
Nov 2019 – Present | **Links: Github Repo**,**Intel Devmesh**
Reconstructing music using EEG signals: Working on reconstruction of music being listened by a subject using EEG signals. Reconstruction will be done using generative models like GANs.

RUBY ASSOCIATION GRANT 2019
Nov 2019 – Mar 2020 | **Links: Github Repo**, **Announcement**, **Proposal**, **Final Report**
Worked on adding image manipulation features and improving the library **Rubyplot**: An advanced plotting library for Ruby.

PROJECTS

SIMULATING SPIKING NEURAL NETWORKS ON SPINNAKER
December 2018 – May 2019 | **Links: Poster**, **Final Report**
Worked under **Prof. Basabdatta Sen Bhattacharya** on simulating a Basal Ganglia spiking neuron model on the neuromorphic platform **SpiNNaker**.

IMAGE SEGMENTATION OF NUCLEI
Jan 2018 – April 2018 | **Links: Code , Final Report**
Worked under **Prof. Bijil Prakash** on Segmentation of slide images containing multiple nuclei to output a single gray scale image of all segmented nuclei. Implemented a model inspired from U-net in python using PyTorch.