BADRINATH SINGHAL

House No. 1, Latia Garo Path, Bishnu Rabha Path, Beltola tinali, Guwahati, Assam 781028
(+91)8486508149 ⋄ badrinath2602@gmail.com ⋄ www.linkedin.com/in/badrinath-s

EDUCATION

Indian Institute of Technology, Guwahati *July 2014 - June 2018*
Bachelor in Technology CPI: 8.36/10
Department of Electronics and Electrical Engineering

WORK EXPERIENCE

Synapsica Technologies, Bangalore Oct 2018 - Present
AI Scientist

· Developed Synapsica Spindle which assists radiologists to diagnose Spinal Stenosis by measuring spinal canal diameter, detecting vertebrae, lumbar discs in MRI scans using computer vision and deep learning.

Computer Vision and Fuzzy Systems Lab May 2017 - July 2017
Hanyang University

· Integrated Multi-EIASC Algorithm with IT2 Fuzzy C-Means Clustering Algorithm to give Multi-IT2 Fuzzy C-Means Algorithm. Instead of using the EIASC algorithm over each of the dimensions of pattern sets separately, we used Multi-EIASC algorithm for the complete pattern set which uses n-dimensionality of pattern sets as its fundamental property.

Ikegami Lab May 2016 - July 2016
The University of Tokyo

Worked on implementing DCGAN on celebrity faces datasets and exploring linear operations in latent vector in z space.

PUBLICATIONS

Uddeshya Upadhyay, Badrinath Singhal, Meenakshi Singh, *"Spinal Stenosis Detection in MRI using Modular Coordinate Convolutional Attention Networks"*, Oral Presentation, IEEE International Joint Conference on Neural Networks (IJCNN) 2019, Budapest, Hungary

Shashank Huddedar, Mayank Kagliwal, Badrinath Singhal, *"Performance analysis of a Novel IT2 FCM Algorithm"*, Oral Presentation, IEEE World Congress on Computational Intelligence (WCCI) 2018, Rio, Brazil.

PROJECTS

Efficient-VLSI-Implementation-of-SVD.
Bachelor Thesis Project
Prof. Shaikh Rafi Ahmed, Dept. of EEE, IIT Guwahati
Extended implementation of calculating Singular Spectrum Analysis(SSA) using CORDIC algorithm for 2x2 matrix to nxn matrix. Implemented and verified the same on MATLAB and Verilog with few test cases.

Autonomous Intelligent Robot
Robotics Club, IIT Guwahati
Built a self-navigating bot which is able to map the environment, localize itself and reach the given goal

position autonomously using Dijkstras algorithm. The bot was implemented using Robot Operating System (ROS).

TECHNICAL STRENGTHS

Pytorch, Python, OpenCV, Matlab, C, C++, Latex

ACADEMIC ACHIEVEMENTS

Offered Merit cum Means (McM) scholarship by IIT Guwahati for 3 consecutive years.

1st in Algorithmic Trading competition during Kriti 2016, IIT Guwahati.

Joint Entrance Examination 2014: Secured position in top 1% among 150000 students.

5th Rank in Guwahati region for AISSCE 2013.

State rank of 48 in JEE Mains 2014.