BADRINATH SINGHAL

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EDUCATION

- **Indian Institute of Technology Guwahati** July 2014 - June 2018
  Bachelor of 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.

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.
- **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

- Joint Entrance Examination 2014: Secured position in top 1% among 150000 students.
- 5^{th} Rank in Guwahati region for AISSCE 2013.
- Offered Merit cum Means (McM) scholarship by IIT Guwahati for 3 consecutive years. 1
- 1^{st} in Algorithmic Trading competition during Kriti 2016, IIT Guwahati.
- 48^{th} state rank in JEE Mains 2014.