MRINAL TAK

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EDUCATION

Indian Institute of Technology, Guwahati   *2013-2017*
B.Tech in Computer Science & Engineering   GPA: 8.72
Thesis: Designing payment mechanism in Knapsack Auctions
Research Interests: Game Theory, language modeling, deep learning

EXPERIENCE

Goldman Sachs, Bangalore   Jan 2019- Current
· Working on Topic Modeling to determine abstract topics in documents.   *Senior Analyst*
· Proposing new approaches to improving search engine rankings.

Samsung Research, Bangalore   June 2017- Jan 2019
· Worked on fact checking and Question Answering system   *Research Engineer*
· Created Calendar-360, a smart calendar based on Conversational Intelligence, using NLP techniques

Hanyang University, Seoul, South Korea   May 2015- July 2015
· Worked on image segmentation using General Type 2 Fuzzy Logic.   *Research Assistant*
· Incorporated spatial information to the objective function of the standard FCM algorithm to effectively segment noisy images.

PROJECTS

Payment Mechanism in Knapsack Auctions   *Bachelor Thesis*
Guide: Prof. G. Sajith, Dept. of CSE
- Devised a frugal mechanism for Knapsack Auctions, which minimizes the payments.
- Constructed Knapsack graph by reducing the knapsack problem to costliest path problem on a directed acyclic network.
- By leveraging on the most optimal solution, minimised the payments being made to the agents to keep the mechanism incentive compatible.

Entropy: Language Model Based Readability Metric   *2017*
Guide: Prof. Ashish Anand, Dept. of CSE
Used KL divergence as a computational measure of readability of text.

Convolutional Neural Networks based Video Surveillance System   *2016*
Guide: Prof. Arijit Sur, Dept. of CSE
Used Hierarchical Convolutional features and Multi-Domain net, to build an object tracker.

TECHNICAL SKILLS

Programming Languages	C++, Java, Python, C
Libraries and frameworks	Keras, Hadoop, Protobuf
Softwares	MATLAB, Visual Studio, IntelliJ, Android Studio, LaTeX

COURSES COMPLETED

- Algorithmic Game Theory
- Intelligent Systems & Interfaces
- Data Mining
- Computer Vision using Machine Learning
- Data structures

- Operating System
- Artificial Intelligence
- Algorithms
- Probability
- Database Management System

ACADEMIC ACHIEVEMENTS

Achieved All India Rank-954 in IIT-JEE

Certified Lean Six Sigma Green Belt

Achieved All India Rank-32 in NSTSE (National Level Science Talent Search Exam)

Recipient of KVPY fellowship with All India Rank- 268

POSITION OF RESPONSIBILITY

Senior Executive in E-Cell, IIT-Guwahati

Organizer and Public Relation Speaker of UDGAM- The IIT Guwahati Entrepreneurship Summit

Organizer of Technothlon - The International School Championship