Mrityunjay Kumar

cs.stonybrook.edu/∼mrkumar/ | mrkumar@cs.stonybrook.edu | 631.710.1058

EDUCATION

STONY BROOK UNIVERSITY
M.S in Computer Science
Graduating MAY 2020
Stony Brook, NY
GPA: 3.52 / 4.0

MAULANA AZAD NATIONAL INSTITUTE OF TECHNOLOGY
B.Tech in Computer Science
Graduated
May 2014 | Bhopal, India
GPA: 7.85 / 10.0

LINKS

Github:// **mrityunjaykumar911**
LinkedIn:// **mj2030**
Twitter:// **@mjay_nitb**
Quora:// **Mrityunjay-Kumar**

COURSEWORK

GRADUATE
Operating System
Distributed System
Computer Vision
Data Science Fundamentals
Data Visualization

UNDERGRADUATE
Information Retrieval
Natural Language Processing
Data Structure & Algorithms

TEACHING
Introduction to Data Science
Teaching Asst

SKILLS

PROGRAMMING
Over 3000 lines:
C • Python • C++
Familiar:
Java • Matlab •golang

TOOLS/TECHNOLOGY

NLTK • Golang • NumPy • PySpark
Storm • Keras • tensorflow • protobuf
gRPC • Celery • Neo4j

RESEARCH

DISTRIBUTED SYSTEM LAB | Researcher
Jul 2019 – Present | Stony Brook, NY
Working with **Prof. Shuai Mu** to develop a Distributed Multi-core Key-Value Database based on Software Transaction Memory and multi-paxos. **Ongoing**.

EXPERIENCE

TALENTICA SOFTWARE | Senior Software Engineer
April 2016 - Jan 2019 | Pune, India
- **Network Traffic Estimation**
  Implemented a regression model for bandwidth prediction. Lazy Loading of ML model instance in storm from AWS. Implemented object based serialization serving framework over http requests. In production.
- **Network Traffic Detection**
  Designed an auto-encoder based ML Module to detect the VOIP Traffic. 80% accuracy in Audio vs Video. Failed in video based VOIP.
- **Single cell Identity Classification** Auto-encoder based neural network to identify the single cells with 83% accuracy. In Production.
- **Indoor Location Positioning for BLE assets**
  - 91% accuracy in location prediction and 95% classifying the region for *Static Assets* and 68% accuracy in Regression based on region triangulation using RSSI and the interference correction.
- **Search Engine**
  Improved relevancy by 25%. Improved Online Ontology enhancer, NLP Pipeline for Document Clustering, Keyword Extraction, Text Classification. In production.

MEDIATEK | Software Engineer
August 2014 – April 2016 | Noida, India

- Improved Audio Player sub-modules Playlist, Integrated BT Stack in MMI Layer
- Led Internal Tool Development - Designed and Wrote SW Layer code for Stress Test based Combo{GPS-WiFi-BT} Tool

ACADEMIC PROJECTS

- Implemented Sharded and replicated fault-tolerance key-value store based on raft. **Ongoing**.
- **MapReduce library in golang**
  Implemented distributed map reduce library and worker failures from paper.
- **Backup File System in Linux Kernel**
  Implemented stackable file system which takes created backup on every successful write/delete/rename having queue based version & retention policy.
- **Encryption based System tool for Linux Kernel**
  Implemented system call for encrypt/decrypt file using AES provided by kernel crypto API.
- **Implemented Image Captioning Engine on Flickr8k dataset**
  Used CuDNNGRU and GloVE word embedding model on top of pre-trained VGGNet to generate caption for Flickr8k dataset

PUBLICATIONS

[1] R. Guntur and **Mrityunjay Kumar**. Learning to fingerprint the latent structure in question articulation. In *2018 17th IEEE International Conference on Machine Learning and Applications (ICMLA)*, pages 73–80, Dec 2018.