

Mrityunjay Kumar

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EDUCATION

- **Stony Brook University** Stony Brook, NY
Master of Science in Computer Science; GPA: (3.53/4.0) *Jan. 2019 – May. 2020 (exp)*
Relevant Courses : Distributed Systems, Computer Vision, Operating Systems, Data Visualization
- **Maulana Azad National Institute of Technology** Bhopal, India
Bachelor of Engineering in Computer Science & Engineering; GPA: (7.85/10.0) *July. 2010 – June. 2014*

RESEARCH EXPERIENCE

- **Distributed systems Lab** Stony Brook, NY
Under guidance of Prof. Shuai Mu *June 2019 - Present*
 - **Distributed Multi-core Database:** Working on Speedy Transactions in In-Memory Database based on Software Transaction Memory with multi-paxos based consensus.

EXPERIENCE

- **TALENTICA SOFTWARE** Pune, India
Senior Software Engineer *April 2016 - Jan 2019*
 - **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 Identification:** 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 for cell based print technology. 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
 - **Financial Document Search Engine:** Improved relevancy by 25%. Improved Online Ontology enhancer, NLP Pipeline for Document Clustering, Keyword Extraction, Text Classification. In production.
- **MEDIATEK** Noida, India
Software Engineer *August 2014 – April 2016*
 - **Audio Player:** Improved Audio Player sub-modules Playlist, Integrated BT Stack in MMI Layer
 - **Internal Tool Development:** Wrote SW Layer code for Stress Test based Combo(GPS-WiFi-BT) Tool.

PROJECTS

- **Raft:** Implemented Sharded and replicated fault-tolerance key-value store based on raft.
- **Map-Reduce library:** 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.

Publication

- [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.

PROGRAMMING SKILLS

- **Languages:** C++, Python, C, Golang
- **Technologies:** PySpark, Storm, Keras, protobuf, gRPC, Neo4j