

Mrityunjay Kumar

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EDUCATION

- **Stony Brook University** New York, USA
Master of Science in Computer Science, GPA: (3.59/4.0) *Jan. 2019 – May. 2020 (expected)*
- **Maulana Azad National Institute Of Technology** Bhopal, India
Computer Science & Engineering, CGPA: 7.85/10 *Aug. 2010 – May. 2014*

Coursework: Distributed Systems, Operating Systems, Data Science, Computer Vision, Visualization

EXPERIENCE

- **Distributed Systems Lab - Stony Brook University** Jun 2019 - till
Graduate Research Assistant - Under guidance of Prof. Shuai Mu *Stony Brook, NY*
 - **Distributed Multi-core Transactional Database**
 - * Implementing asynchronous replication with multi-process paxos to remove contention.
 - * Implemented verification pipeline for serialization of logged streams.
 - * Implemented fast header-only/compiled, C++ logging library facilitating aligned memory allocators with features like Rotating log and auto-flush in approx. 1200 LOC.
- **Talentica Software** April 2016 - Jan 2019
Senior Software Engineer *Pune, India*
 - **Estimation & Prediction algorithms for Wireless Systems**
 - * Implemented an ingestion pipeline for model deployment using **Storm, Kafka, Python, Java**
 - * Achieved 80% overall accuracy in network traffic prediction using **Ensemble regression Tree**.
 - * Added an ad-hoc client to Storm topology to support collection of Real-time data to Disk & Batch pipeline using **Java, Spark**.
 - * Developed a live BLE asset view portal to support data collection team, adding 70% more correctness to site calibration using **JavaScript, Kafka, Python**.
 - **File Sync Application**
 - * Developed a client application update framework to support release notification for multi-talent architecture using **Java, C++, Python**.
 - **Financial Document Search Engine:**
 - * Improved search relevancy by 45%. Improved Online Ontology enhancer by 30%, NLP Pipeline for Document Clustering, Keyword Extraction, Text Classification.
- **MediaTek** Aug 2014 - April 2016
Software Engineer *Noida, India*
 - As a **feature owner** of Audio module, implemented design and bug-fixes for new product release. Improved playlist design to reduce playlist update **overload by 25%**, Integrated BT Stack in MMI Layer
 - Wrote Software Layer code for Stress Test based Combo **GPS-WiFi-BT** Tool in VC++

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.

PROGRAMMING SKILLS

- **Programming Languages:** C, C++, Java, Go, JavaScript, SQL
- **Technologies:** Storm, Spark, Redis, REST, Kafka, AWS, Git/Perforce, MATLAB