Mrityunjay Kumar

Mobile: (631) 710-1058
Stony Brook University *E-mail:* mrkumar@cs.stonybrook.edu
Stony Brook, NY 11790 USA *WWW:* www.cs.stonybrook.edu/~mrkumar

Education

STONY BROOK UNIVERSITY Stony Brook, NY
M.S in Computer Science *Jan. 2019 –*
Relevant Courses : Operating Systems, Computer Vision, Data Visualization, Analysis of Algorithms

MAULANA AZAD NATIONAL INSTITUTE OF TECHNOLOGY Bhopal, India
Bachelor of Technology in Computer Science and Engineering; GPA: 7.85/10.0 *Aug. 2010 – May. 2014*
Relevant Courses : Data Structure and Algorithms, Natural Language Processing, Information retrieval

Academic / Personal Projects

- Backup File System in Linux Kernel Stony Brook, 2019
- Encryption based system tool for Linux Kernel Stony Brook, 2019
- MusicX - A visualization approach to Music Recommendation system Stony Brook, 2019
- Implemented Image Captioning Engine on Flickr8k dataset, VGGNet, Keras Stony Brook, 2019
- Implemented Face detection & Classification Engine, Cats & Dogs dataset Stony Brook, 2019
- Product feature and Opinion extraction of Amazon dataset MANIT Bhopal, 2014
- Semantic Orientation Of Twitter Data MANIT Bhopal, 2013

Computing Skills

- Languages and packages: Python, C/C++, Spark, Kafka, Storm, Celery, working exposure to Java.
- ML Libraries : tensorflow, keras, tflearn, sklearn, nltk
- Operating Systems: UNIX/Linux, Mac OS X

Experience

- **Talentica Software** Pune, India
  Senior Software Engineer - Machine Learning *April 2016 - Jan 2019*
  - **Throughput Estimation of network Pipeline**: [XGBoost,PySpark,tpot]

    Developed a data driven model for predicting network throughput in live environment
    Key Features:
    - Mimicked network parameters to capture WAN and LAN characteristics to procure the throughput
    - Automated Lazy Loading of AWS model instance in storm machines
    - Achieved : 97% Accuracy in high range speed & 78% Accuracy in Low range speed
  - **Machine Learning as a service**: [Python,Celery, Redis, Keras]

    Developed a boilerplate for training and running Machine learning algorithms in service layer
    Key Features:
    - A Scalable platform for API based triggering of Machine Learning model training & serving
    - Detached architecture for managing ML Services
    - Object based serializer for IPC, availing unified view of obtaining hollow and trained models
  - **Indoor Location Positioning**: [Python,tensorflow, Spark]

    Developed Indoor locatization tracking model for static and live assets
    Key Features:
    - Static Assets - A data driven probabilistic region classification
    - Live Assets - Regression based on region triangulation using RSSI and the interference correction
  - **Single cell Identity Classification**: [Python,opencv,tensorflow]

    Developed automated single cell detection using neural networks
    Key Features:
    - Modelled a novel approach for detecting structure of single cells with 83% accuracy

- **NLP Pipeline**: [Python]

  Developing extensive Language Processing pipeline model
  Key Features:
  - A Novel algorithm for unlabelled text modelling
  - Keyword Extraction and Text Classification
  - External Model Training Framework : RASA NLU, wit.ai

- **Cloud Sync Application**: [Python,C++,File System]

  A File system service which allows selective two way delta sync
  Key Features:
  - Multi-platform silent auto-update framework
  - Sharing of content across Multi-tenant architecture

- **Search Engine**: [Machine Learning,NLP, Python,Neo4j]

  A topic modelling based domain specific search engine model for handling large documents and providing intent based search retrieval.
  Key Features:
  - Online Ontology enhancer & Parser
  - Designed in-line query expansion using Ontology
  - Used graph DB for faster query processing and retrieval
  - Automated formation ontology based on domain knowledge
  - Clustering of documents with deep learning to understand the underneath context

- **Mediatek** Noida, India
  Software Engineer *Aug 2014 - April 2016*

  - **Audio Player**: [C,MTK Native OS]

    Entitled Major Ownership for Audio player in feature phones
    Role and Responsibilities:
    - Implementation of new requirements and assisted bug resolution
    - Implemented user defined play list [generation,delete,sharing]
    - Integrated new BT stack into Audio Player

  - **Combo Tool**: [C++,MFC,PCAP,OS Native Layer]

    GUI Tool for processing modular commands for various system level test.
    Key Features:
    - Implemented wrapper for WIN32 API for interacting with POSIX lib
    - Implemented event driven asynchronous architecture
    - Implemented packet data interfaces : Serial, RS232, Ethernet, USB

  - **GPS Logger**: [Java,GPS Port Layer]

    GUI Tool for monitoring online NMEA data from GPS Port.
    Key Features:
    - Designed a pipeline system where Logger tool and android application can run benchmarking test cases.

Publications

Ravindra Guntur and **Mrityunjay Kumar**, Learning to fingerprint the latent structure in question articulation
2018 , 17th IEEE International Conference on Machine Learning and Applications (ICMLA) .

Last updated May 28, 2019