Mrityunjay Kumar

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Education

- **Stony Brook University** — Stony Brook,NY
  M.S in Computer Science — *Jan. 2019 – 2021*
- **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*

Courses

- **Graduate Courses**
  Computer Vision,Operating System,Analysis of Algorithms, Data Visualization — *Spring 2019*
- **Relevant Under Graduate Courses**
  Data Structure and Algorithms, Natural Language Processing,Information retrieval & others — *2010-2014*

Programming Skills

C, C++ , Python	●●●●●●●●●
Nltk, Scikit, NumPy	●●●●●●●●●
Keras, tensorflow, tflearn	●●●●●●●●●
PySpark, Storm, Celery	●●●●●●●●●
Data Structure and Algorithms	●●●●●●●●●

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/Journals

• **Learning to Fingerprint the Latent Structure in Question Articulation** Talentica Software, India
Kumar Mrityunjay, Guntur Ravindra *ICMLA 2018*

Academic / Personal Projects

• **Product feature and Opinion extraction of Amazon dataset**: Prof. Saritha Khetawat
[NLTK,Python]
- Implemented detection of explicit features and opinion extraction in dataset
- Used graph DB to store the reviews about features

• **Semantic Orientation Of Twitter Data** : Prof. Saritha Khetawat
[Java,Stanford Parser,Senti-wordnet,ML]
- Implemented classification for important aspect about a tweet
- Implemented semi-supervised score provider word polarity
- Listed user provided sentiment for key features about particular product.