

EDUCATION

Masters in Computer Science, **University of Massachusetts Amherst, Amherst, MA USA** (Fall '17 – Spring '19)

Current Coursework (Spring'19): Distributed and Operating Systems

Completed Coursework: *Probabilistic Graphical Models, Algorithms for Data Science, Advanced Machine Learning, Natural Language Processing, Information Retrieval, Reinforcement Learning*

GPA - 3.78/4

B.Tech in Electrical Engineering, **Indian Institute of Technology(IIT)- BHU, Varanasi, India** (Fall '09 – Spring '13)

Coursework: Data Structure and Algorithms, Probability Theory, Calculus, Vector Algebra

PATENTS & PUBLICATIONS

- **US 20160110849 A1- "Method and Apparatus for Storing, Processing and Reconstructing Full Resolution Image out of Sub Band Encoded Images."**

WORK EXPERIENCE

[Comcast Research Labs, Washington DC, USA](#) (May'18-Aug'18)

Research Intern

- Developed an architecture for entity disambiguation.
- Conceived and implemented an algorithm for entity recommendation using Knowledge graphs.
- Presented the proof of concept of the above with use cases for Xfinity X1.

[Samsung Research India, Bangalore, India](#) (Jun '13 – Jul '17)

Lead Engineer Apr'17- Jul'17 | Sr. Software Engineer Apr'14- Mar'17 | Software Engineer Jun'13 – Mar'14

CNN Model Design, Development and Optimization for Samsung BIXBY (Jan'17 – Jul'17)

- Developed the character CNN model of Samsung Bixby for product launch of Galaxy S8.
- Optimized the model thereby improving precision by ten percent.

SC-LSTM based Natural Language Generation IP (Mar'16 – Dec'16)

- Developed the natural language generation IP using SC-LSTM for Smart Assistant.

Context Based Inference Engine IP (Jul'15 – Feb'16)

- Developed context-based inference engine which deduces the activities in a SMS/WhatsApp conversation and analyses the user sentiment. This culminated into App release for Samsung India Market – 'JifiCal'.

Knowledge Base Engine (Mar'15 – Jun'15)

- Designed and developed the knowledge base engine based on causality of events.

Sluggishness detection in Smartphone (Dec'14 – Feb'15)

- Conceived and implemented proof of concept of sluggishness detection in smartphones using deep learning.

Image Compression IP for Camera Sensor Data and Sensor to Display Pipeline (Jun'13 – Aug'14)

CURRENT PROJECTS

Entity Set Expansion, CIIR, UMass Amherst, Guide: Professor James Allan (Oct'18 – Present)

- Currently researching on unsupervised methods for entity set expansion on a corpus given a seed set of entities.
- Conceived and implemented a shared LSTM supervised approach to solve the entity set expansion problem.
- Created the complete end to end data pipeline from scratch.

GO Evidence Code Classification, UMass Amherst, Oracle Labs [\[Report\]](#) [\[GitHub\]](#) (Jan'17 – May'18)

- Designed a classifier to identify what type of evidence to assign to a Gene Ontology (GO) annotation.
- Developed Hierarchical Attention Model and TF-IDF model to create document embedding for abstracts.

Rowless Universal Schema, UMass Amherst, IESL Lab [\[Report\]](#) [\[GitHub\]](#) (Nov '17 – Jan'17)

- Improving Rowless Universal Schema Knowledge Base using Complex Embedding.
- Designed and developed the shared LSTM architecture with complex embedding for relations and sentences.

TECHNICAL SKILLS

Languages: JAVA, Python

Tools and Frameworks: TensorFlow, spaCy, NLTK, Sci-Kit, Numpy, Scipy, Spark, Docker, Git, Agile, AWS, Theano

EXTRACURRICULAR ACTIVITY

- MS Social Chair for Spring'18