# Tanmaya Shekhar Dabral

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## EDUCATION

**Carnegie Mellon University – School of Computer Science**  Pittsburgh, USA
*Master of Science, Computer Science*  *2018 – Dec 2019 (expected)*

> **Selected Coursework:** Introduction to Machine Learning (PhD), Introduction to Deep Learning, Probability and Mathematical Statistics, Introduction to Computer Systems

**Birla Institute of Technology and Science**  Hyderabad, India
*B.E.(Hons), Computer Science; GPA: 9.84/10 (Distinction)*  *2014 – 2018*

## SKILLS

**Languages**: C++, Java, Python, C, SQL

**Tools**: PyTorch, Theano, scikit-learn, OpenCV, Elasticsearch

## EXPERIENCE

**Adobe Systems Incorporated**  Bangalore, India
*Product Intern*  *Jan 2018 - July 2018*
- Developed various types of query caching mechanisms to be used by local applications for an Elasticsearch based online search service.

**Nanyang Technological University**  Singapore
*Summer Intern, Multimedia Lab*  *May 2017 - July 2017*
- Implemented a GPU version of the non-segmental Dynamic Time Warping algorithm for audio search.
- Developed a system to generate a robust representative query from multiple queries for a word.

**Indira Gandhi Centre for Atomic Research**  Kalpakkam, India
*Summer Intern*  *April 2016 - July 2016*
- Designed and implemented a novel, stochastic variant of the Particle Swarm Optimization algorithm for aligning ontologies, which is a combinatorial optimization task.

## PROJECTS

**Birla Institute of Technology and Science**  Hyderabad, India
- **Image processing for urinary tract infection detection**  **Fall 2017**
  Designed and implemented a proof-of-concept for an image processing pipeline to estimate optical densities from images of cuvettes for UTI detection.
- **Text summarization using sentence embeddings**  **Fall 2017**
  Implemented the LexRank algorithm that works on the sentence embeddings generated using Word2Vec vectors for text summarization.
- **Multi-scale CNN for automatic music tagging**  **Spring 2017**
  Designed and implemented a deep convolutional neural network for music tagging that takes into account the multi-scale nature of musical features.
- **Vehicle detection and classification on a video of an Indian highway**  **Fall 2016**
  Designed and implemented an image processing pipeline to detect the vehicles in a video of an Indian highway and classify them into heavy and light using blob level features.

## PUBLICATIONS AND CONFERENCE PRESENTATIONS

Tanmaya S. Dabral, Amala S. Deshmukh, Aruna Malapati, 2017. A Multi Scale Convolutional Neural Network Architecture For Music Auto-Tagging, The 7th International Conference on Soft Computing for Problem Solving

Tanmaya Shekhar Dabral, N. Madurai Meenachi, Vidya Sundararajan, M. Sai Baba. A Variant of the Particle Swarm Optimization for Ontology Alignment, the 10th National Conference on Recent Advances in Information Technology, 2016 (Poster presentation)