

## KSHITIZ SETHIA

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### Education

#### New York University, Courant Institute of Mathematical Sciences

Master of Science in Computer Science (MS in CS)

**GPA: 3.84/4**

May 2016

- Fundamental Algorithms
- Statistical and Mathematical Methods
- Probabilistic Graphical Models
- Heuristic Problem Solving
- Machine Learning and Computational
- Natural Language Processing
- Production Quality Systems
- Statistics
- Realtime and Big Data Analytics

#### Vellore Institute of Technology University, Vellore, India

Bachelor of Technology in Information Technology

**GPA: 8.76/10**

2011

- Algorithms
- Artificial Intelligence
- Probability and Statistics

### Projects

#### Heuristic Problem Solving

2015

- Approximate solutions to NP-hard problems: Simulated Annealing, Ant Colony Optimization, Genetic Algorithms
- Adversarial game playing: Alpha-Beta Pruning

#### Distributed Question Answering System (basic)

2015

- Software to answer Who and What questions in natural language, using Wikipedia as a knowledge source.
- Uses Hadoop MapReduce and Pig queries in backend.

#### Acronym Disambiguation (Ongoing)

2015

- Deciding correct expansion of acronym in text, a problem similar to word sense disambiguation
- Performing near state-of-the-art on the MSH Corpus
- **Approach:** regex, classification based on top TFIDF words, LDA (topic model) of document

#### Identifying degree of Diabetic Retinopathy

2015

- Built a system identifying degree of damage in retina of diabetic patients, achieved 78% accuracy
- **Approach:** image processing, balanced re-sampling, deep learning (ConvNet)

#### Learning to summarize from Wikipedia

2015

- Created a system which summarizes Wikipedia articles using unsupervised and supervised approaches
- **Approach:** (unsupervised) graph based approach, (supervised) SVM with RBF kernel learning from document LDA, paragraph LDA and Word2Vec representations of current and nearby sentences

### Skills

- **Proficient:** Python, Java
- **Conversant:** C# ( .NET, MVC framework ), Lua ( torch ), ML, Scheme, NodeJS, OpenCV, JavaScript, jQuery, HTML, Ruby on Rails, JSON, XSLT, chunked MIME HTTP, C, Scala, Ada
- **Software Suites/Libraries:** scikit learn, gensim , nltk , Hadoop, Pig, MatLab , Octave, WireShark, GIT, SVN

### Professional Experience

#### System Software Engineer, Hewlett Packard Research & Development, Bangalore

2011 -2014

- Implemented the page scanning API for OXPd (a printer SDK) in C#
- Built a system which triggered automated build verification against virtual printers on GIT push

### Awards and Activities

- Awarded highest year-end rating at Hewlett Packard.
- Four awards at Hewlett Packard for product-wide enhancements and quality of deliverables.