Umang Mehta

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Objective

Pursuing Masters Degree in **Data Science** and aspire to work in the field of **Deep Learning**, **Machine Learning**, **Artificial Intelligence** and **Cognitive Science & Engineering** with applications involving **Speech Recognition**, **Voice Interaction**, and **Natural Language Processing**.

Professional Profile

I am a **Machine Learning Researcher & Engineer** with 6 months of active development experience in **Natural Language Processing** and **Social Media Mining**. I also have 3 years of Professional and 1 year of Freelance experience as **Software Developer** and **Team Mentor** with expertise in **Database Design, Java Programming,** and **Web Development**.

Education

Master's Degree in Data Science **MAY 2019**
School of Informatics Computing and Engineering(SICE), Indiana University, Bloomington
Major Courses: Advanced NLP, Machine Learning, Deep Learning Systems, Data Mining, Elements of AI, Algorithms Design and Analysis, Statistical Inference, Advanced Database Concepts, High Performance Big Data Systems. GPA: 3.6

Bachelor's Degree in Computer Engineering **MAY 2013**
K J Somaiya College of Engineering(KJSCE), Mumbai University, India
Graduated with SECOND Class, aggregate 59.77% equivalent to GPA 3.21.

Technical Skills

Languages:	Java (4 yrs), Scala (1 yr), Groovy (1 yr), C/C++, Python (1 yr), Javascript (4 yrs), R, MATLAB, PHP(2 yrs)
Database:	**RDBMS-** MySQL(4 yrs), PostgreSQL, Oracle; **NoSQL-** MongoDB(1 yr), Neo4J, Apache Solr(2 yrs), Elasticsearch, Redis
Web Design:	HTML5-CSS3(4 yrs), JQuery(4 yrs), AngularJS(3 yrs), UnderscoreJS(3 yrs), AJAX(4 yrs), JSON(4 yrs), Bootstrap(4 yrs), Polymer
Frameworks:	Spring Framework(3 yrs), Hibernate ORM(3 yrs), Play Framework(1 yr), Morphia, Smack(XMPP), JSSC, Apache HTTP(3 yrs), PHP-MySQL(1 yr), Symfony Framework, Doctrine ORM, NumPy, SciPy, Pandas, NetworkX, Django, ND4J
Machine Learning:	TensorFlow, Keras, Deeplearning4J, Scikit-Learn
NLP Toolkits:	NLTK, Stanford CoreNLP, Spacy, OpenNLP, Spark NLP, Polyglot
Big Data:	Hadoop, Spark
Project Utility:	**VCS:** Git, SVN; **Dependency:** Maven, Gradle, Composer, NPM
Servers:	Apache 2, Apache Tomcat 7-8, NodeJS, Netty, Openfire
OS:	Linux(Ubuntu), Windows, MacOS
Cloud:	Amazon Web Services(AWS), Google Cloud Services(GCS)
Certification:	Oracle Certified Professional JavaSE6 Programmer

Work Experience

Kelley School of Business, Bloomington, IN **JUNE 2018 - PRESENT**
Graduate Research Assistant

- Research and implement NLP methods to extract information from SEC Filings.
- Develop or implement models using ML and NLP to analyze model and board leadership of companies.

AriaData Inc.(Aridat), Bloomington, IN **FEB 2018 - PRESENT**
Chief NLP Research Engineer(Unpaid Position)

- Build an analytics engine to determine the critical reception of an artists work based on chatter on social media.
- Built Sentiment Classifier using Naïve Bayes and Multiclass Logistic Regression to classify tweets from artists as +1, 0 and -1 and implemented metrics to analyze sentiment distribution over different demographics.
- Leading and advising on the research and implementations of advanced NLP methods to improve the efficiency of the Sentiment Classifier and add new functionalities to improvise the analytics provided to the artists.

Vitruvian Technologies Pvt. Ltd.(VTPL), Mumbai(India) **JUNE 2014 - JULY 2017**
Senior Developer & Team Mentor

- Developed functionalities for web-based ERP and CRM systems in the domain of Real Estate.
- Collaborated in a team of 12 for project development including Java Programming, Data Structure & Database Design, Web Design & Development and Unit Testing.
- Lead, trained and mentored a sub-team of 5 throughout the development of the projects.
- Contributed to the Core Framework, proprietarily used by the firm for project development.

Algonation, Mumbai(India) **JUNE 2013 - MAY 2014**
Co-founder, Developer

- Developed web portals and mobile apps for small and medium scale enterprises.
- Built server software for TCP Layer Protocols customized for cloud-based industrial requirements.
- Developed standalone and distributed software for parts of manufacturing production lines.
- Mentored and trained groups of 3-4 undergraduate interns for developing industry level projects.

Academic Projects

Neural Conversation Model — *Seq2Seq Learning using LSTM/RNN* **AUG 2018 - DEC 2018**

- Building a Proof of Concept(PoC) for Sequence-to-Sequence (Seq2Seq) Learning process for a Neural Conversation Model using Long Short-Term Memory (LSTM) and Recurrent Neural Networks (RNN) on Deeplearning4J (DL4J) library.
- Train Model on Cornell Movie-Dialog Corpus.
- Experiment with High-Performance Computing (HPC) optimization options in DL4J.
- Experiment with Big Data System coupling with DL4J for Hadoop and Spark.

OpenIE — *Open-Domain Information Extraction* **MAY 2018 - PRESENT**

- Working for this research project under computational linguistics faculty at IU Prof. Damir Cavar for processing unstructured text and extract data, knowledge, entities, relations and mapping out event information.
- Enabling semantic search with concept abstraction and linking concepts to concepts in large knowledge graphs like YAGO, DBPedia and Microsoft Concept Graph.

Speech Prosody and Pragmatics — *Detecting Prosody and Pragmatics of spoken language* **MAY 2018 - PRESENT**

- Working under computational linguistics faculty at IU Prof. Damir Cavar for this research project focusing on prosody, intonation contour detection, focus and stress pattern analysis for the processing of semantic and pragmatic aspects of spoken language.

Twitter Sentiment Analysis — *Data Mining and Social Media Mining Mini Project* **JAN 2018 - APRIL 2018**

- Developed a Data Preprocessing module using NLTK with steps involving POS Tagging, Stop Words Removal, Stemming and Lemmatization, Negation Handling, N-gram and Sentiment Scoring using AFINN and TextBlob.
- Built Sentiment Classifier using Naïve Bayes and Logistic Regression to classify tweets as +1, 0 and -1 with 87.89% accuracy.

Image Orientation — *Classifier using Neural Network and Adaboost* **DEC 2017**

- Developed a Multi-Layer Feed-Forward Neural Network and an AdaBoost classifier in collaboration with 2 people to identify the orientation of an image.
- Achieved accuracy of over 71% in Neural Network and over 67% in Adaboost on a test set of 1000 images trained on a corpus of over 36000 images.

Part of Speech — *Tagging using Hidden Markov Model* **NOV 2017**

- Developed a program in collaboration with 2 people to identify parts of speech for English words in a sentence using Hidden Markov model and Viterbi Algorithm.
- Achieved a word accuracy of over 95% and sentence accuracy of over 54% on a test set of 2000 sentences consisting of over 29000 words trained on a corpus of over 44000 sentences.

Pichu — *Simplified Version of Chess* **OCT 2017**

- Collaborated in a group of 3 people to develop a program in Python using the Minimax Algorithm to recommend a chess move for a given board state.

Leadership

Data Science Club at Indiana University **FEB 2018 - PRESENT**
President and Treasurer

- Perfected the foundational structure of the Club Leadership.
- Organized hackathon for analyzing the opioid crisis in collaboration with SPEA at Indiana University.
- Spearheaded the initiative of monthly Newsletter and a semester wise e-Magazine.

Students' Council, K J Somaiya College of Engineering, Mumbai **JUNE 2011 - MAY 2012**
Creative Head

- Organized Technical and Cultural Festivals in KJSCE as Creative Head of the Organizing Committee.
- Headed the Creative Team for Kshitij, the Annual College Magazine of KJSCE.

Extra Curricular

- Won 2 consecutive Annual Fall Chili Cook-offs in 2017 and 2018 organized by SICE at Indiana University.
- Organized Bollywood Quiz as Event Head in Symphony, the Annual Cultural Festival of KJSCE in 2011.
- Volunteered in the Infra and Logistics Team for Technical and Cultural Festivals in KJSCE from 2009 to 2011.
- As a hobby writer, got my poetic verses published in Kshitij, the Annual College Magazine of KJSCE and articles on topics of technology published in the Technical Magazine of the Computer Society of India, KJSCE Chapter.