Parag P. Dakle

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Education

The University of Texas at Dallas — Richardson, TX
Ph.D. in Computer Science | GPA 3.95/4.00 — *Aug. 2016 – Ongoing*

Savitribai Phule Pune University — Pune, India
BE in Computer Engineering | GPA 73/100 First Class with Distinction — *Aug. 2010 – May 2014*

Experience

Lymba Corporation — Richardson, TX
Software Engineer Intern (Part-time) — *May 2020 - Aug 2020*

- Created a Word Sense Dismbiguation tool using word embeddings and a rule based system
- Designed a benchmarking framework for a Python based machine learning framework

Software Engineer Intern — *Jun 2019 - Aug 2019*

- Created a machine learning framework to integrate Python deep learning tools with the existing Java NLP pipeline
- Designed Named Entity Recognition system using BERT and BiLSTM in Pytorch

Software Engineer Intern — *May 2018 - Aug 2018*

- Implemented a semi-supervised topic-based keyword extraction tool using word embeddings giving 2x accuracy and 8x time reduction over the existing system
- Designed algorithms to extract lexicons and generate BRAT configurations from an ontology

Bottle Rocket — Dallas, TX
Software Engineer Intern — *Jun 2017 - Aug 2017*

- Implemented multiple UX/UI stories for two Android applications that have been released on Play Store
- Followed SCRUM practice, GIT version control and JIRA for all the projects

Muffin App — Pune, India
Full Stack Developer — *Feb 2016 - Jul 2016*

- Engineered and developed the Muffin Android Application
- Developed Spring-Boot modules and assisted in designing the product system architecture

Great Software Laboratory — Pune, India
Software Engineer — *Jul 2014 - Jan 2016*

- Investigated the WebRTC protocol and modified it for an Elderly Video Calling application
- Found points of failure in an existing system and successfully scaled it up by more than 200%
- Mentored a junior employee in the development of a web-based graphical user interface for SIPp tool

Projects

US Federal Elections Search Engine | *Java, MongoDB, Maven, Git* — Fall 2018

- Designed a continuous indexer using Single-pass In-Memory Indexing for 100k+ crawled web pages
- Implemented topic-based PageRank algorithm to rank indexed web pages
- Created the project development structure and assisted the team in API development and search result clustering

Sentence Similarity | *Python* — Fall 2017

- Designed a tool to measure similarity of two questions from a Quora dataset
- Evaluated different scoring functions and semantic features using SVM and Logistic Regression classifiers

DavisBase | *Java, Git* — Spring 2017

- Designed a database engine to perform CRUD operations with 9 other database commands
- Implemented B+ Trees for storing the data

Movie Rating Prediction | *Java, Git* — Spring 2017

- Implemented Collaborative Filtering for movie rating prediction on Netflix dataset containing 100M samples

Additional Experience

- **Teaching Assistant** at The University of Texas at Dallas (Fall 2017 - ongoing)
- **Git Essentials Workshop**, *Speaker*, The University of Texas at Dallas, Feb 2020.
- **Deep Learning Hands On**, *Speaker*, Dallas Natural Language Processing Meetup, June 2019.
- **Git Essentials Workshop**, *Speaker*, The University of Texas at Dallas, Jan 2019.
- **Topic-based Keyword Expansion**, *Speaker*, Dallas Natural Language Processing Meetup, August 2018.

Technical Skills

Languages: Python, Java, SQL, JavaScript, HTML/CSS, PHP, Shell
Frameworks: Pytorch, Tensorflow, Node.js
Developer Tools: Git, Docker, Jenkins, RabbitMQ, ActiveMQ

Publications

- **Dakle, Parag Pravin**, and Dan Moldovan. "CEREC: A Corpus for Entity Resolution in Email Conversations." *Proceedings of the 28th International Conference on Computational Linguistics*. 2020.
- **Dakle, Parag Pravin**, Takshak Desai, and Dan Moldovan. "A Study on Entity Resolution for Email Conversations." *Proceedings of The 12th Language Resources and Evaluation Conference*. 2020.
- Takshak Desai, **Dakle, Parag Pravin**, and Dan Moldovan. "Joint Learning of Syntactic Features Helps Discourse Segmentation." *Proceedings of The 12th Language Resources and Evaluation Conference*. 2020.
- Desai, Takshak, **Dakle, Parag Pravin**, and Dan Moldovan. "Generating questions for reading comprehension using coherence relations." *Proceedings of the 5th Workshop on Natural Language Processing Techniques for Educational Applications*. 2018.