Dheeraj **Mekala**

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Education

University of California, San Diego, Masters in Computer Science — *Sept 2019 - Present*

Indian Institute of Technology Kanpur, B.Tech in Computer Science and Engineering, 8.3/10 — *Jul 2013 - May 2017*

Work Experience

Sprinklr India Pvt. Ltd., Data Scientist — *Apr 2018 - Jul 2019*

- Architected and built most of Sprinklr AI's visual insights module that is now used by over 1200 Sprinklr clients.
- Developed in-house computer vision models for visual sentiment, gender, age, inappropriate content detection in images and videos.
- Built a scalable system capable of running classification models over 500 million messages per day using Caffe, Tensorflow, Kafka and Elasticsearch.
- Developed a dockerized auto-scaling python-based framework which is deployed in kubernetes for image classification.
- Deployed a centralized monitoring environment(Grafana, InfluxDB) which gather system metrics as well as docker run-time metrics.

Sprinklr India Pvt. Ltd., Product Engineer — *Jul 2017 - Apr 2018*

- Collaborated with a team of 3 members who developed an end to end pipeline that incorporates DoubleClick tracking in ads for integrated reporting.
- Implemented core functionalities to improve the feature of importing and exporting ads which is the primary way, the users undergo to create ads.

Microsoft India, Machine Learning Intern — *May 2016 - Jul 2016*

- Built fully automated case routing system in Microsoft Dynamics CRM.
- Developed machine learning models in Microsoft Azure Machine Learning studio which predicts the ideal assignment candidate for a case.

Publication

SCDV: Sparse Composite Document Vectors using soft clustering over distributional representations
Dheeraj Mekala, Vivek Gupta, Bhargavi Paranjape, Harish Karnick
Proceedings of the 2017 Conference on Empirical Methods in Natural Language Processing, 2017

User bias removal in review score prediction
Rahul Wadbude, Vivek Gupta, Dheeraj Mekala, Harish Karnick
Proceedings of the ACM India Joint International Conference on Data Science and Management of Data, 2018

Projects

Bayes-Optimal Hierarchical Classification over Asymmetric Loss, Research Project, IIT Kanpur — *Dec 2016 - May 2017*

- Designed $O(nlog(n))$ algorithm to find Bayes optimal hierarchical classification over asymmetric/symmetric loss.
- Designed $O(log(n))$ algorithm to find Bayes optimal hierarchical classification over asymmetric loss under logical assumptions.

Analysis of Data Prefetching Algorithms, Computer Architecture, Prof. Mainak Chaudhuri, IIT Kanpur — *Dec 2016 - May 2017*

- Researched data prefetching algorithms to reduce data access speed.
- Designed and implemented modified version of AMP algorithm and analyzed it with several prefetching algorithms.

MIPS Simulator, Computer Architecture, Prof. Mainak Chaudhuri, IIT Kanpur — *Dec 2016 - May 2017*

- Implemented a fully functional MIPS integer processor with support for floating point instructions.
- The final pipelined processor has 2 bypass-paths and interlock logic to analyze the effect of stalls in a pipeline.

Go-MIPS Compiler, Compilers, Prof. Subhajit Roy, IIT Kanpur — *Dec 2015 - May 2016*

- Built an end-to-end cross compiler of Go in python using `ply` package for lexing and parsing.
- Implemented referencing-dereferencing operators, loops, functions, importing library, scope check of variables, recursion and memory stack.

Object Recognition in Surveillance Videos, Machine Learning, Prof. Harish Karnick, IIT Kanpur — *Dec 2015 - May 2016*

- Extracted relevant frames from camera feed to reduce space required for data storage and identified moving objects(ROI).
- Researched various techniques for feature extraction, background subtraction and experimented with multiple classifiers and boosting algorithms.

NachOs-Impl: Implementation of functionalities for NachOs, Prof. Mainak Chaudhuri, IIT Kanpur — *Aug 2015 – Dec 2015*

- Implemented shared memory interface, demand paging and system calls related to semaphores, conditional variables.
- Implemented and evaluated various process scheduling algorithms like FIFO, Round Robin and Non-Preemptive scheduling algorithms.

Skills

Programming Languages	Java(Proficient), Python(Proficient), C(Proficient), C++, Octave, Matlab
Databases & **Frameworks**	MySQL, MongoDB, Elasticsearch, ELK, LAMP
Software & **Utilities**	Docker, Kubernetes, Rancher, Tensorflow, Keras, Caffe, Kafka, LaTeX, Git

Relevant Courses

Machine Learning	Machine Learning, Statistical Natural Language Processing, Recommender systems, Probabilistic Graphical Models
Systems	Operating Systems, Database Systems, Computer Organization, Computer Architecture, Compiler Design
Theory	Data Structures and Algorithms, Advanced Algorithms, Theory of Computation