

Divyendra M

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EDUCATION

University of Massachusetts Amherst

- MS in Computer Science (Apr 2019)

Amrita University, India

- BS in Computer Science (Dec 2013)

TECHNICAL SKILLS

- Worked on Deep QA models and Probabilistic Graphical models
- Good idea on OOP design patterns
- Have knowledge on scalable architectures.

PROJECTS

IBM T.J. Watson (*University-Collaboration*) (*ACL'18 MRQA best paper award*)

(Feb'18-Apr'18)

- Built a tool for analysing the reasoning and knowledge required to tackle science question datasets
- Using our annotated data, underscored the difficulty of tackling open-domain QA for existing Deep QA models

Cellworks Research Ltd, Bangalore, India | Software Consultant

(Apr '16 - Dec '16)

- Built a HIPPA compliant cloud orchestrator infrastructure over AWS
- The infra was built to leverage the cheap AWS Spot instances which have to be *smartly* bid upon by our system competing with global users at the risk of losing instances when outbid.
- Designed to distribute, monitor and parallelize the simulation jobs bringing an estimated 30% cost savings and 45% time reductions

RocketSingh | Motorbike taxi aggregator startup, India | Lead Developer | [CODE](#)

(Jun '15 - Feb'16)

- Implemented the core GeoSpatial Index wrapper to fetch the taxis in nearby locations in log time [\[CODE\]](#)
- Architected, Designed the server side architecture to support the 10K scale
- Designed and wrote the entire mobile facing app technology stack respecting the mobile environmental constraints.
- A GeoClustering module which would cluster customer orders having vicinal destinations.

Intruo | Interior design online marketplace, India | Software Engineer

(Dec '14 - Jun '15)

- Built the 'Content Management module' which aggregates the latest design videos and blogs from the web and gives a provision to be ranked. This helped build the customer Engagement and the site's SEO ranking.
- Implemented the Timeline activity module for customer profiles and the customer facing Android mobile app which includes the ownership of UI/UX design decisions.

Deutsche Bank | Bangalore, India | Software Engineer

(Oct '13 - Nov '14)

- Maintained the middleware environment for the bank's OTCTES trade system
- Setup the Message oriented middleware setup using TIBCO and Java Messaging Services

ACADEMIC PROJECTS

Enhancing training effectiveness of deep networks trained using Mutual Training technique.

- Worked on teacher-student compression models and mutual learning compression models
- Suggested an enhancement to the *Mutual Learning* technique, effective when deep student models are used by initializing weights into a broader local minima space using hint based pretraining.

Deep QA models

- Worked on SQUAD(72.2 F1) and bAbI(90.6%) QA datasets to re-implement SOA models for reading comprehension task. As part of which compared traditional RNNs inabilities against SOA Bi-Directional Attention Flow model

Optical Character recognition using CRFs

- Implemented linear CRFs to model English character pattern extraction from greyscale images
- Implemented Belief propagation for Exact inference and achieved 91% accuracy

Topic modelling using Stochastic Blackbox Variational learning

- Modelled the latent topics of previous NIPS papers as a Factor Analysis model
- Used Stochastic Blackbox Variational learning framework to train the latent var

LANGUAGES AND FRAMEWORKS

- Python(>10K), Java(>10K), C, PHP
- Android, Play(Web), Tensorflow, Pytorch, Scikit-learn