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

- Neural Networks applied as Deep QA models

- Good idea on OOP design patterns

- Have knowledge on scalable architectures and built a couple.

PROJECTS

IBM Watson *(Current::University-Collaboration)*
- Study and Analysis of current QA models(neural & otherwise) in open-domain QA settings(QAngaroo dataset)
- Evaluate the benefits of a RL trained IR component to achieve Maximum likelihood in answering questions requiring chain-reasoning vs using a standard, independent IR component

Cellworks Research Ltd, Bangalore, India | Lead Developer *(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* bidded 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
- #Python3 #AWS-Spot #Event driven architecture #MySQL #Asynchronous IO

RocketSingh | Motorbike taxi aggregator startup, India | Lead Developer *(Jun '15 - Feb'16)*
- Implemented the core GeoSpatial Index wrapper to fetch the taxis in nearby locations in logarithmic time
- 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.
- #Quad Trees #Play-framework #Java #Key-Value NoSQL #Pub-Sub reactive design #Android

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.
- #Play-framework #Android #DynamoDb #Java

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

Social Connect
- Built an initial level social networking web app with photo sharing facility :: Groovy and Grails framework

Paragraph level Plagiarism Detector
- Implemented the Smith-Watermann algorithm with Irwin's cutoff to detect local string sequence alignments

CODE HOSTED

- `https://github.com/Divyendra/GeoSpatialIndexCode`
- `https://github.com/Divyendra/RocketSingh`