Akshit Meghawat

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Education

North Carolina State University — Raleigh, USA
Master of Computer Science, Data Science track; GPA: 3.85 — *May 2019*
- **Courses**: Data Guided Business Intelligence, Advanced Topics in Machine Learning, Spatial and Temporal Data Mining, Design and Analysis of Algorithms, Artificial Intelligence, Database Management Systems

Vellore Institute of Technology — Vellore, India
Bachelor of Technology in Information Technology; GPA: 8.54/10.0 — *May 2015*
- **Courses**: Probability and Statistics, Linear Algebra, Operations Research, Object Oriented Programming in C++

Projects

Deep Learning: Combining satellite imagery and ML to predict poverty GitHub: https://goo.gl/YGCb8H
- Implemented **convolutional neural network** (architecture inspired from VGG-16) with **transfer learning** to extract features from daytime satellite images and classify countries in Africa into 3 different economic classes. (Python, Pandas, Keras, R)
- Due to lack of reliable economic data, **nighttime light intensity was used as a proxy for economic factors**, allowing us to scale without labelled data.

Machine Learning: Enron Fraud Detection GitHub: https://goo.gl/3FECqf
- Implemented **Decision Tree Classifier with AdaBoost** from scratch (Python, Numpy) to identify Enron fraud suspects with public Enron financial and email dataset (link). Obtained validation F1 score of 0.6

Music Artist Recommendation System
- Designed a music artist recommendation system (**collaborative filtering**). (PySpark)
- Used data from Audioscrobbler comprising of 24.2 million users' plays of artists with their count.

AdWords Placement: Bipartite Graph Matching
- Developed a Bipartite Graph Matching system to match advertisement slots with search queries using advertisers' budget and bidding data. (Python, Pandas)
- Implemented **Greedy, Balance** and **MSVV** algorithms to find the optimal solution (maximize revenue from advertisers).

Database Design Project
- Designed and developed a database system for a hotel chain to maintain check-in and staff information. (MySQL, Java)
- Utilized RDBMS concepts of stored procedures, integrity constraints and triggers to generate reports, manipulate and search check-in information.

Aysmptotic Analysis of Algorithms
- Performed large scale computational experiments in C++ with multiple sorting algorithms(merge, heap etc) to analyze asymptotic constants for runtime and key-comparisons on numbers with different input shapes (random, organ pipe, sawtooth).

Experience

McKinsey & Company — Bangalore, India
Junior Digital Analyst, Technical Intern — *Jan 2015 - Apr 2017*
- Developed **data-driven analysis & visualization** tools (JavaScript, AngularJS, MongoDB) for **10+ clients** from wide range of industries (insurance, e-commerce, shipping, government etc.)
- Built an event tracking software with **MEAN stack** for organizations to systematize data collection and management. It helped in prioritization of resource allocation, scheduling and cost control. Also helped in measuring KPIs for impact assessment and future planning. The software is used by **5+ government organizations** in Africa.
- Designed a database system (**CRUD operations, Indexing, Sharding**) for an insurance firm to auto-consolidate data from various international data banks (OECD, World Bank) and provide macro-level analysis.

Trusted Shares & Investment Ltd — Mumbai, India
Software Developer Intern — *Summer 2013*
- Developed a suite of software programs in C++, Linux(Ubuntu) to simulate and optimize the **Turtle Trading model** by **Richard Dennis** enabling statistical and heuristic analysis of large amounts of financial data.

Technical Skills

Programming: Python, C++, JavaScript, HTML, CSS, C, Java, R, Matlab, SQL
Tools and Frameworks: Numpy, Pandas, Scikit-learn, Matplotlib, Seaborn, Keras, TensorFlow, XGBoost, Jupyter, Hadoop, Spark, PySpark, Kafka, AngularJS, Node.js, Bootstrap, Highcharts, MySQL, MongoDB, PyMongo, Bottle, Git