Ravi Choudhary

MACHINE LEARNING ENTHUSIAST · SOFTWARE DEVELOPER · KAGGLE COMPETITOR

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Education

University of Massachusetts – Amherst.   *Amherst, MA*

M.S. IN COMPUTER ENGINEERING, GRADUATION DATE: 2017, MAJOR GPA= 3.5   *Sept. 2015 - PRESENT*

- Coursework: Machine Learning, Inferential Statistics, Probability, Natural Language Processing, Advanced Algorithms, Distributed Operating Systems, Image Processing

University of Rajasthan   *Rajasthan, India*

B.E. IN ELECTRONICS & COMMUNICATIONS ENGINEERING, GRADUATION DATE: 2017, MAJOR GPA= 3.5   *July 2005 – June 2009*

Technical Skills

Languages: **Fluency:** C++, Python **Proficiency:** Java **Familiarity:** R, HTML, CSS, JavaScript, SQL, NoSQL
Other: Hadoop, MapReduce, Spark, D3js, ArcGIS, Django, Flask, MongoDB, Redis, Amazon EC2, Tensorflow, Docker.

Experience

Data Scientist Co-op, Philips Research, Cambridge, MA   *May 2016 - Present*

- Build an interactive mapping tool called Atlas of Lighting to determine the impact of lighting intensity in diverse areas of the city by measuring statistics on demographics, intensity of urban development and nighttime light intensity.

- Extracted significant sentimental behavior using Vader sentiment API from social media datasets (Google places & Instagram) to observe the audience sentiment about an installed lighting products.

- Curated, merged and preprocessed very complex social media dataset collection through RESTful APIs and identified objects through computer vision techniques.

- Build a model to predict lighting related documents by using Random Forests, Gradient Boosting and Naïve Bayes algorithm.

Sr. Software Engineer, Honeywell Inc., Bangalore/Phoenix (C++, Python, Algorithms)   *Sept 2010 - Aug. 2015*

- Designed and implemented a distributed, fault-tolerant functionality of a large, multi-process, multi-threaded embedded system.

- Implemented inter-communication between two or more FMS using Finite-State-Machine/Event-Driven model.

- Performed unit testing for various functionalities, static source code analysis and performance benchmarking and written test case scripts in Python ensuring that products interface correctly.

- Strong organizational and management skills with excellent written and verbal communications.

Projects

Cataract Detection using Deep Convolutional Neural Networks   *May 2016 – Sept 2016*

- Developed and trained a RCNN to perform a cataract detection task using pair-wise matched images.

- Developed a web application which takes an image and classifies if a person has cataract or not.

- Tested accuracy of the cataract detection task when subjected to illumination and color variations and bettered existing state-of-the-art methodologies.

Home Depot Product Search Relevance   *Jan 2016 - May 2016*

- Applied word2vec and TF-IDF to convert the textual representation of info into sparse features.

- Applied SVD and PCA on term-document matrix for feature reduction.

- Document's preprocessing: Tokenization, stemming, query expansion using household appliance databases.

Bazaar: Peer to Peer Trading System   *Jan 2016 - May 2016*

- Developed a P2P Network. Implemented Bully Algorithm for leader election and also implemented Lamport Clock in trading process for event ordering.

- Cache Consistency is achieved between traders using push consistency model and heart beat protocol is implemented.

Netflix: Prediction of Movie ratings for given user and movies (Python, ML, NLP)   *Sept 2015 – Dec 2015*

- Used Netflix data set for prediction of ratings, given the user and the movie.

- Experimented various algorithms like Nonnegative Matrix Factorization, KNN, Logistic Regression, and Naive Bayes resulting in better recommendation.