Sudhir Nallam

Data Scientist

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Work experience

March 2010 – Present

IBM, T.J. Watson Research Center, NY

Data Scientist/Software Engineer

Developed a predictive analytics tool to help the IBM M&A team to improve the procurement of new acquisitions. Worked on analyzing the public response on IBM sponsored events by doing sentimental analysis on twitter and blogs data. Designed and developed MAPro (Performance & Risk Optimizer), a web application with integrated cognos reports.

July 2009 - March 2010

Navy Federal Credit Union, Pittsburgh, PA

Software Engineer

Migrated lotus notes based Reversal application to web based J2EE application in websphere. Connected to mainframe programs (wrapped by Host Bridge) through web service clients using restful webservices.

January 2008 July 2009

FedEx Ground, Pittsburgh, PA

Software Engineer

Contributed in increasing the project performance (4 million requests/day) by tuning the JDBC calls, monitoring the server using JProfiler, altering the service programs (AS/400 programs). Developed service layer programs and parsers which have optimized time complexity.

May 2005 July 2006

Robert Bosch, India

Software Engineer

Implemented java based production configuration tool, to decrease the production downtime. Gained substantial knowledge about the concepts, design advantages, traps and pitfalls of successful object oriented design and programming.

Graduate projects

Limitations of Generative Models

Inference & Representation

In this project, we have taken two generative models, VAEs and GANs, and understand their power and limitations in approximating various data density estimations. We also studied their data modelling capabilities in various noisy conditions.
Code: https://github.com/sudhirNallam/IRClass.git

Stacked What-Where Auto-encoders

Deep Learning

Implemented stacked What-Where Auto-encoders to classify MNIST data in unsupervised setting.
Code: https://github.com/sudhirNallam/SWWAE.git

Machine Translation with sequence-to sequence model

Deep Learning

Pytorch implimentation of Sequence-to-Sequence Learning with Attentional Neural Networks.
Code: https://github.com/sudhirNallam/seq2seqModel.git

Predictive Models to Determine Judge Bias in Asylum cases

Machine learning

In this project we developed a predictive model for classifying whether or not a refugee is granted asylum in the United States, and to use that model to determine which features bias judges the most.
Code : https://github.com/sudhirNallam/predictingRefugeeAsylum.git

Understanding the Complex Interactions in NYC Taxi data and weather data

Big data

We combined NYC taxi data with weather data. From the data we have inferred the correlation that exists between Tip variations with weather conditions and Group riding with weather conditions.
Code: https://github.com/sudhirNallam/BigData-Project.git

Energy Disaggregation Product Proof-of-Concept

Introduction to Data Science

In this project we have proposed a new tool for households, that they can use to monitor their energy consumption in real time through electromagnetic interference (EMI) and electrical power, and provide a breakdown of their electrical usage using a kNN model.
Code: https://github.com/sudhirNallam/ds_ga_1001.git

Graduate courses

Statistics, Machine Learning, Big Data Analytics, Natural Language Understanding with Deep Learning, Inference and Representation, Deep learning

Education

2015 – 2018 **Data Science**
Master of Science,GPA-3.5
New York University, New York

2006 – 2008 **Mechanical & Aerospace Engineer**
Master of Science,GPA-3.27
Illinois Institute of Technology, Chicago, IL

2001 – 2005 **Mechanical Engineer**
Bachelor of Technology, 75.13%
National Institute of Technology, Warangal, India

Awards

2012 **Outstanding Technical Achievement Award**
IBM T.J. Watson Research center

Software skills

Languages	Java, Python, R, Lua, C++, PL/SQL, Octave
Python Packages	pandas, scikit-Learn, numpy, scipy, matplotlib, pymongo
Tools & Technologies	Torch, Tensorflow, Hadoop(ecosystem), Spark, SPSS, Elasticsearch, AlchemyAPI, Spring, Struts, Hibernate
Databases	Mongo DB, DB2, Cognos TM1
Web Technologies	HTML, CSS, AJAX, Restful services, XML, JSON, Javascript
Visulization	D3, Cognos BI
Operating systems	Linux- RHEL, Ubuntu; Windows