Abhinav Sood

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Technical Skills

SQL, Python, Apache Spark, Hadoop, Hive, Keras, Scikit-learn, REST APIs, Tableau, Unix, Shell, Git

Professional Experience

Data Scientist, Artificial Intelligence and Machine Learning   May 2017 – *Present*
Scotiabank – Toronto, Canada

- Built and deployed complex data cleaning and transformation pipelines using SQL, Python and Spark
- Developed a random forest model in Spark to reduce manual credit adjudication cases by 75%
- Trained deep CNN models in Keras to categorize scanned financial documents using transfer learning
- Developed tree-based anomaly detection models in Spark to reduce fraud losses by $8.4MM annually
- Implemented Histogram Based Outlier Score (HBOS) in Spark, a fast and scalable unsupervised algorithm for outlier detection in transactions and clickstream logs

Data Scientist, Co-op   May 2016 – Dec 2016
PHEMI Systems – Vancouver, Canada

- Created text processing and topic modelling pipeline in Spark to discover groups in medical reports
- Implemented an algorithm in Spark for analyzing genetic mutations to study diversity in populations
- Built PHEMI Data Science Toolkit to enable enterprise-grade analytics with Spark and Apache Zeppelin

Data Miner, Consultant for Financial Crime and Compliance Management   Jun 2014 – Jul 2015
Oracle Financial Services Software – Bangalore, India

- Developed behavior detection scenarios for Oracle Mantas Anti Money Laundering platform using SQL
- Built complex data cleaning and transformation pipelines with SQL and Python for mining big datasets

Systems Engineer   Jan 2012 – May 2014
Tata Consultancy Services – Bangalore, India

- Scoped complex business requirements from globally distributed cross-functional teams
- Developed database applications to manage worker permits, chemicals and e-waste at client facilities
- Automated the allocation of packaged semiconductors in distribution centers based on demand & supply to save over $10M annually

Education

M.Sc., Computing Science, Professional Masters in Big Data   Sep 2015 – Apr 2017
Simon Fraser University, Canada   **GPA**: 3.82

B.Tech., Computer Science and Engineering   Aug 2007 – May 2011
Punjab Technical University, India   **Percentage**: 75.11%

Internships

Research Intern, Gade Autonomous Systems Pvt. Ltd. – Hyderabad, India   Nov 2011 – Dec 2011
Developed Human-Robot Interaction module for the NAO humanoid robot to promote linguistic and social learning in children with autism spectrum conditions

Software Development Intern, Clip Weave Solutions Pvt. Ltd. – Noida, India   Jan 2011 – Jun 2011
Developed User & Playlist Management APIs for a video bookmarking service   Jul 2010 – Aug 2010

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Academic Projects

- Built a Spark Streaming application to analyze music popularity trends in tweets
- Implemented various tree-based models to predict performance of mutual funds using Spark
- Developed a recommendation engine for universities and research interests by applying topic modeling techniques to conference abstracts from Statistical Society of Canada
- Developed a project to recommend optimal brewery tour in Vancouver using a curated dataset of brewery ratings and quality attributes of beer they served
- Evaluated performance of convolutional neural networks, feed-forward neural networks and support vector machines on a ten-class image recognition task using Caffe and MATLAB

Personal Projects

- Built a Python web scraper to download Stanford Center for Professional Development course videos
- Built an SQL tool to validate CAS Registry Numbers that validate all known chemicals on Earth
- Developed a simple task management application using NLP techniques using PHP

Awards and Honors

Honorable Mention, HackBD 2016, BuildDirect – Vancouver, Canada   **Sep 2016**
Developed a visual search & product recommendation engine with BuildDirect and Google Vision APIs

Center of Excellence for Financial Crime and Compliance Management   **Sep 2014**
Oracle Financial Services Software – Bangalore, India

On the Spot Award, Tata Consultancy Services – Bangalore, India   **Mar 2014**
Received from EVP and Head, Global HR, for outstanding contribution to the organization with process improvement initiatives and timely delivery of high quality software