

Abhinav Sood

778-893-5456

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linkedin.com/in/abhinavsood



Skills

Programming	: SQL, Python, Scala, R, Shell, PHP, HTML, CSS, JavaScript
Databases	: PostgreSQL, MySQL, Oracle, Microsoft SQL Server, MongoDB, Hive, Accumulo
Data Engineering	: Data Modeling, Dimensional Design and Architecture, ETL Pipelines, REST APIs
Cloud Platforms	: Amazon Web Services (AWS)
AI and Machine Learning	: Apache Spark, Scikit Learn, StatsModels, SciPy, InterpretML, Keras, PyTorch, TensorFlow
DevOps and Automation	: Infrastructure as Code (AWS CDK and CloudFormation), CI/CD (Git, Bamboo, AWS CodePipelines), Containerization and Orchestration (Docker, Podman, Kubernetes), Service Management and Scheduling (Celery, systemd, cron)

Professional Experience

Senior Data Scientist, Data Analytics

Sep 2018 – Present

Canadian Investment Regulatory Organization – Toronto, Canada

- Established Data Analytics as a *Center of Excellence* by translating complex business needs into data driven questions, quantifying ROI of insights, and aligning technical solutions with executive priorities
- Designed and delivered IRIS, a Data Analytics platform supporting Compliance, Financial Operations, Surveillance, Enforcement and Regulation
- Partnered with internal teams and external partners (e.g., Bank of Canada, FINRA, Canadian Securities Administrators, Provincial Securities Commissions) to deliver data-driven solutions and products
- Simplified complex technical concepts for non-technical audiences using clear analysis and visual storytelling
- Led enterprise data governance, mapping organizational data assets to improve quality, accessibility, and cross-functional use
- Implemented advanced data solutions such as:
 - Optimized **ETL** pipelines using PySpark for multiple **data warehouses**
 - **CIROBot**, an AI chat bot with RAG over regulatory data and documents
 - **PYROC**, a shared Python library for efficient data science and application development workflows
 - **Exploratory Data Analysis** using Python and SQL and **Dashboards** with Superset, ChartJS, D3
- Led the **DevOps & AWS Infrastructure** team to deliver scalable and cost-effective business solutions
- Built and led a high-performing product team through mentorship, knowledge-sharing, and innovation

Data Scientist, Artificial Intelligence and Machine Learning

May 2017 – Aug 2018

Scotiabank – Toronto, Canada

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

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Data Scientist, Co-op

May 2016 – Dec 2016

PHEMI Systems – Vancouver, Canada

- Created text processing and topic modeling 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 Apache Spark and 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

B.Tech., Computer Science and Engineering

Aug 2007 – May 2011

Punjab Technical University, India

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

Startup featured on Mashable's [Spark of Genius](#) Startup Series

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