Harshal Soni

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Data Science | Machine Learning | Cloud Computing | Software Engineer | Python, Scala, Java

Education

University of Alberta **Sep. 2019 – Dec. 2020**
M.Sc in Computer Science; Specialization in Multimedia; GPA: 4/4 Edmonton, CA
Awards: MITACS Research Fellowship ($ 45K)

Dharmsinh Desai University **Jul. 2015 – May 2019**
B.Tech in Information Technology; Major in Software Engineering; CGPI: 8.25/10 Nadiad, India
Leadership: Head of Finance at University chapter G.O.M.A.D.

Professional Experience

AltaML inc. **May. 2020 – Jan. 2021**
Machine learning engineer - software and data science division Edmonton, CA

- Lead a team to develop a "risk minimization model" for COVID-19 by forecasting patients' vulnerabilities based on their plasma samples with 92.6% correctness.
- Launched a "Bid Prediction system" for a $ 100M+ engineering client by designing a novel 'skill ranking' algorithm based on Game Theory to eliminate the model's unfairness and improving their win-rate by 45%.
- Tailored interactive dashboards for several internal and external use-cases using Tableau and Plotly; and web development tools such as D3.js and chart.js.

SICI pvt ltd. **Mar. 2019 – Jun. 2020**
Machine learning engineer - automation and IOT Bharuch, India

- Spearheaded data streaming pipelines by implementing automated ETL tasks in DataFactory(EMR), wrangling terabytes of client data using Apache Spark Clusters, effectively eliminating the need for on-prem infrastructure and a cost-saving of $50K per year.
- Claimed IP for the customer by designing a novel 'model predictive controller' to automatically regulate their manufacturing plant's parameters for optimal production, reducing their carbon footprint by 25%.
- Lead a team to architect 'Mutual Fund Re-balancing system' which recommends BI users asset management strategies based on intraday market streams; minimizing client default rates by 6% y/y.

Blackwindow design inc. **Dec. 2018 – Mar. 2019**
Software engineer, Research and Development (intern) Vadodara, India

- Liaised and partnered with a team to develop an NLP-chatbot using the Microsoft BOT framework for a visa consultancy firm improving business performance and customer engagement by 70%.

Ganesh infotech pvt ltd. **May 2017 – Jun. 2018**
Software engineer (part-time) Nadiad, India

- Mediated feasibility studies for clients by analyzing requirements in an engaging manner and devised BigData connectivity and wrangling modules using Spark.
- Collaborated with a team of data engineers and BI analysts to improve the efficiency of the 'promotion recommendation engine' by 25% by leveraging KPI from review images.

Core Competencies

ETL:	DataFactory, EMR, Kinesis
Analytics:	Apache Spark, Databricks, SageMaker, Scala
Modelling:	Tensorflow, Keras, Scikit-learn, H20.ai
Visualization:	Tableau, Plotly, D3
MLOps:	KubeFlow, Azure Pipelines, MLFlow
Orchestration:	Docker, Git, Airflow
Web Frameworks:	Flask, Django, Node.js
Cloud Services:	Azure, AWS

Awards

- Procured **$ 60K** fundings from ATB Financials to develop an NLP conversational agent that translates language to SQL; mining the data based on user's input and applying predictive forecasting techniques to produce customized financial dashboards.
- Certified machine learning, deep learning, reinforcement learning by Microsoft, cloud development by Google Cloud, and iterative innovation process by MIT.

Research

360-DEGREE VIRTUAL REALITY VIDEO CALLING APPLICATION.

- Designed a novel streaming server scheme over HTTP for the 360-degree videos maximizing through-put over industrial standards by 10-15% using an adaptive AI tiling scheme.

InSAR satellite imaging coherence and denoising using Graph Convolution Networks.

- Pioneered a super-clustering technique for denoising InSAR images outperforming the present Deep graph learning-based technique by 8-10%.

Automated Segmentation of Medical Images And Mobile Visualization in 3D

- Developed a novel server-less mobile app that allows doctors to visualize MRI scans in 3D at 50+ FPS using deep learning segmentation techniques on cellphones.