

Pratik Gujral

Data Scientist



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SUMMARY

A versatile engineer with 4-years of full-time R&D work experience in ML, deep learning, data engineering, visualization and computer vision. Adept at predictive data modelling, feature engineering, distributed data analysis, data discovery and profiling, data mining, ETL pipelines and ADAS, targeted at delivering action-oriented solutions to challenging business problems.

SKILLS

- **Programming:** Python (Pandas, Matplotlib, Seaborn, PySpark, Scikit-learn, PyTorch, Keras, OpenCV), R, C/C++
- **Frameworks:** Python Flask, Apache Hadoop, Apache Spark, Apache Airflow
- **Databases:** MySQL, Postgres, MongoDB, Cassandra
- **Amazon Web Services:** EC2, S3, Elastic Map Reduce, SageMaker, Athena, Lambda, CloudWatch
- **IBM Cloud:** Watson Studio, Object Storage
- **Chatbot services:** Dialogflow, Microsoft Azure Bot Services, Luis.ai, IBM Watson Assistant
- **Additional:** Git, CI/CD, Microsoft Power BI

EXPERIENCE

MARUTI SUZUKI IND. LTD | ASSISTANT MANAGER (DATA ANALYTICS), R&D

Jul 2016 – Present | Gurugram, Bengaluru (India)

- Setup data lake, perform data discovery & profiling, project feasibility on datasets generated over 4 decades
- Develop efficient & scalable scripts for cleaning of IoT data collected from Suzuki Connect telematics unit
- Set up ETL pipelines, and create machine learning models
- Enable data-driven decisions for customer research from vehicle ownership, usage patterns, and maintenance attitude on data sourced through multiple channels
- Reduced development time by developing Python package
- Perform vehicle health prognostics by modelling various parameters from vehicles and their service history
- Built computer-vision based Advanced Driver Assistance Systems (ADAS) proof-of-concept solutions
- Improve efficiency and reduce manpower required in analysing vehicle testing results from R&D labs of vehicle testing teams by creating dashboards and automated reports.
- Reduced ECU validation time by 60% by creating an automation framework for rigorous functional testing of Body Control Module (BCM) on dSPACE Hardware-In-Loop (HIL) testing systems.
- Reduced CAN diagnostic test duration of BCM by 95% by automating on Vector Informatik software stack.

FIS GLOBAL BUSINESS SOLUTIONS | MACHINE LEARNING INTERN

Jun 2016 – Jul 2016 | Gurugram (India)

Built a time-series forecasting model predicting volume of ATM transactions for major Indian banks with over 95% accuracy using ARIMA and Holts Winters in R

NIIT TECHNOLOGIES | DATA SCIENCE INTERN

Jun 2016 – Jul 2016 | Gurugram (India)

Developed Python, R scripts for organizational internal data-driven systems at their Centre of Competency (CoC)

MARUTI SUZUKI INDIA LTD. | INTERN

Jun 2015 – Jul 2015 | Gurugram (India)

- Developed a mobile application that showcased details of all cars produced by Maruti Suzuki
- Stack: Microsoft SQL Server, .NET, XAML, RESTful APIs, Microsoft Azure

PROJECTS

Driver Behaviour Cloning

Applied deep Convolution neural networks and traditional computer-vision techniques for supervised regression of throttle and steering angles on Udacity simulators using PyTorch and OpenCV

Vehicle, Pedestrian and Traffic Sign Detection

Used deep learning for classification and localization of pedestrians, vehicles, and traffic signs on drive.ai, and GSTDB datasets using YOLO v3 in Keras, and applied transfer learning to adapt the model to Indian traffic conditions with over 89% accuracy

Face Recognition Security Application

Developed face recognition-based advanced security system using one-shot learning with Siamese networks on FaceNet model

Neural Machine Translation

Build a Neural Machine Translation (NMT) model to translate human readable dates ("The 29th of August 1958") into machine readable dates ("1958-08-25") using attention sequence-to-sequence model.

HR Buddy

Built an HR chatbot application using Microsoft Azure Bot Services and Luis.ai

Microsoft Private Cloud for Academic and Faculty Research

Set up Microsoft Private Cloud in university labs. This project was done under MODROBS project of AICTE, Ministry of Human Resource Development, New Delhi. Received recognition from college for this project.

VOLUNTEERING

FACEBOOK DEVELOPER CIRCLE DELHI (Apr 2016 – Present)- Core Organizer

- Strategized growth of the Facebook-backed community from <50 members to 15k+ members in 4 years
- Organized 55+ meetups incl. hackathons, code labs, speaker sessions on AI/ML, data science, web development, blockchain and more
- Delivered sessions on computer vision, data visualization, machine learning and statistics.
- Handle partnerships with universities and other communities for hackathons

LEADERS FOR TOMORROW- Non-Profit (Aug 2012 - 2015)- University Head

- Developed a mobile application that established a robust and quick channel of communication between the organization and its 5k+ volunteers at virtually zero running cost.
- As University Head managed 300+ volunteers, started organization's chapter in 10+ colleges, organized mass awareness campaigns against drug abuse and ragging in 70+ colleges, and taught underprivileged children at Govt. run shelter homes.

EDUCATION

GURU GOBIND SINGH INRAPRASTHA UNIVERSITY (Aug 2012 – May 2016)

- B.Tech in Electronics and Communication (GPA: 78%)

HONORS AND ACHIEVEMENTS

- Invited to judge and mentor hackathons at IIT-Roorkee, IIITD, VIPS, IGDTUW and many other colleges
- Speaker for a session on machine learning at Council for Scientific and Industrial Research, Govt. of India
- Facilitator for Machine Learning Crash Course Program by Google
- Completed Deep Learning Specialization on Coursera with >92.5% in all courses
- Recipient of Facebook Secure and Private AI scholarship, Deep Learning Nanodegree scholarship, Facebook Developer Circle scholarship, Intel edge AI scholarship
- Certified Microsoft Technology Associate (MTA) 98-366 Computer Networking
- Microsoft Student Partner: Conducting seminars and workshops on Microsoft technologies, creating enriching apps for Windows platforms and access to MSDN (Microsoft Developer Network)