

Shivam Kumar Pathak

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Career Summary

Data Scientist with 3+ years of proven experience using data and machine learning to solve real world business and research problems. Achievements include development of a predictive pricing business model for a unicorn start-up; flipped profit margin from negative to positive within 3 months of implementation. Authored two research papers in Association of Computing Machinery conferences on applications of artificial intelligence for economic development. Seeking an opportunity to apply data science and generate business value.

Work Experience

Information and Communication Technologies for Development Lab, IIT Delhi

New Delhi, India

RESEARCH ASSOCIATE (DATA SCIENCE), UNDER THE GUIDANCE OF PROF. AADITESHWAR SETH

July2017 - July2018

- Executed research studies on applications of data science, machine learning and artificial intelligence. Conducted literature reviews, experiment designs, development of end-to-end data pipelines, and documentation of research papers.
- Led a team of 15 students on development of a data enabled giant economy monitor and published two research papers on it.

OYOROOMS (Largest Hotel Rooms Aggregator in Asia)

Gurgaon, India

DATA SCIENTIST, CENTRAL STRATEGY

May2015 - Jan2017

- Work alongside top management and help to increase business productivity using data driven systems and insights.
- Directed initiatives on data collection, exploration, modelling, and integrated machine learning models into production pipeline.
- Managed a team of 70+ business developers for roll out of new data backed business model, and strategic expansion of supply network; Increased profit margin of the company from negative to positive along with boosting the supply network by 1.5 times.

Key Projects

Impact of MTA Maintenance Activities on Subway and Taxi Riderships in New York City

New York City, USA

CENTER OF URBAN SCIENCE AND PROGRESS, NEW YORK UNIVERSITY

Sept2018 - Dec2018

- Created **NoSQL Database** to store text data, used **topic modelling** to build maintenance features, and performed **Network Analysis** on subway **Realtime-GTFS data**, to successfully quantify loss of more than **1.4million** riders annually in NYC Subway.

Use Satellite Imagery to Study Impact of Government Policies on Development.

New Delhi, India

RESEARCH ASSOCIATE, INDIAN INSTITUTE OF TECHNOLOGY, DELHI

Nov2017 - July2018

- Developed **deep learning models** to use **satellite imagery** and predict economic indicators with **75+% accuracy**. Analyzed the development in 0.6 million villages using **time series analysis** and determined the dominant patterns in temporal development.
- **Submitted the successful work in ACM COMPASS 2019 Conference (Accra, Ghana).**

Leverage Web Data to Monitor Changes in Corporate-Government Interlocks in India

New Delhi, India

RESEARCH ASSOCIATE, INDIAN INSTITUTE OF TECHNOLOGY, DELHI

Aug2017 - Oct2017

- Created **data mining system** to collect **17 million news articles** from multiple sources, and built **visualization tool** to monitor nexuses of entities in corporate-government social network.
- **Published the successful work in ACM COMPASS 2018 Conference (Hosted by Facebook (Menlo Park, CA)).**

Development of Dynamic Pricing and Contracting Business Model

Gurgaon, India

PROJECT MANAGER AND DATA SCIENTIST, OYOROOMS (LARGEST HOTEL ROOMS AGGREGATOR IN ASIA)

Jan2016 - Dec2016

- Applied **statistical data models** for **behavioral analysis** of 6000+ business partners.
- Built **supply demand price elasticity model** for 20,000+ hotels using more than 20 million transaction records.
- Led development of a **machine learning integrated web system** to predict optimum prices for conducting business in 125 cities.
- **Standardized the pricing process across the network and achieved net positive margin within 3 months of implementation.**

Education

MS in Applied Data Science/Urban Informatics, CUSP, New York University, New York, USA

Aug2018 - Jul2019

Coursework Applied Data Science, Big Data & Machine Learning, Deep Learning, Principles of Informatics, and Geo-Spatial Analytics

Technical Skills

Programming Python, R, Shell & SQL

Deep Learning Tensorflow, Keras & PyTorch

Data Modeling Time-Series Forecasting, Graph Networks,
Statistical Analysis & Natural Language Processing

Data Visualization

Machine Learning

Big Data Technologies

Matplotlib, Seaborn, ggplot & Plotly

Regression, Classification & Clustering

Hadoop & Apache Spark