# ASHUTOSH BAJPAI

### **PROFILE SUMMARY**

- 9+ years of working experience in applied and fundamental research in areas of data science and analytics. Working experience with numerous varieties of data (text, numerical, images) from multiple domains; social, transport, astronomy, financial, retail, BPM, Healthcare etc.
- 5+ years of working experience in clustering, classification, Object Detection, predictive modeling, recommendations, concept mining, sentiment analysis, pattern matching, Information extraction (semi-structured and unstructured), frequent pattern mining (FPM)
- 3+ years of consulting experience in data science projects

#### WORK EXPERIENCE

Data Scientist Wipro Technologies - Bangalore, India	Sep,15 - Present
Scientific Officer - C Tata Institute of Fundamental Research (TIFR) - Mumbai, India	Jul,13 – Aug,15
Research Associate Indian Institute of Technology Bombay (IIT-B) - Mumbai, India	Oct,10 – Jun,13

### **EDUCATION**

Master of Technology (Data Science) Indian Institute of Technology Hyderabad (IIT-H) - Hyderabad, India	Aug,17 – Jun,19
Bachelor of Engineering (Comp Sc. & Engr.) Rajiv Gandhi Technical University (RGTU) - Bhopal, India	Aug,06 – Jun,10

## **SKILLS**

Algorithm Development	•	•	•
Machine Learning	•	•	•
Deep Learning		•	•
Optical Character Recognition	•	•	•
Information Extraction		•	•
Image Processing	•	•	•
Natural Language Processing		•	•
Data Science Consulting		•	•

### **TECHNOLOGIES**

Python, C++, C, JAVA, R
Programing Language
Sk-Learn, Tensorflow, Keras
ML Platform/Lib
NLTK
NLP Platform/Lib
Matplotlib, QDP
Visualization
Tesseract
OCR
OpenCV, Sk-Image
Image Library
MongoDB, MySQL
Data Base
OpenMP, MPI, CUDA
Big Data Processing

#### **PUBLICATIONS**

- Ashutosh Bajpai et al; Comparative study of Faster RCNN with Inception v2 and SSD with inception v2 on signature
  detection capabilities. International Conference on Bigdata, Machine Learning and Applications, NIT Silchar. Dec -19
- KP Singh, Ashutosh Bajpai, et al; THE SOFT X-RAY FOCUSING TELESCOPE ABOARD ASTROSAT: Design, Characteristics and Performance. Journal of Astrophysics and Astronomy. Dec -16
- Ashutosh bajpai, Sanket kotak et al; Bias estimation technique used for X-ray CCD of Soft X-ray telescope. 33rd Astronomical Society of India meeting, Pune Feb-15
- Kallol Mukerjee, Ashutosh Bajpai et al; Ground Calibration and Creation of calibration database for Soft X-ray telescope of Astrosat mission. 33rd Astronomical Society of India meeting, Pune Feb-15
- Sanket Kotak, Ashutosh Bajpai et al; Science data analysis technique for Soft X-ray Telescope of Astrosat. 33rd Astronomical Society of India meeting, Pune Feb-15
- Tom V Mathew, Caleb Ronald, Ashutosh Bajpai; Strip-Based Approach for the Simulation of Mixed Traffic Conditions. Journal of Computing in Civil Engineering, 10.1061/(ASCE)CP.1943-5487.0000378, 04014069. Dec-13

- Ashutosh Bajpai, Pulakesh Upadhyaya, Tom V Mathew; Traffic Simulation as a Service (TSaaS): A cloud step in indian traffic simulator "SiMTraM". International simulation conference of India (ISCI), IIT Chennai, Feb-13
- Pulakesh Upadhyaya, Ashutosh Bajpai, Tom V Mathew; Extension of an interface to integrate different simulation models to accommodate multiple signal-controlled Intersection. International simulation conference of India (ISCI), IIT Chennai, Feb-13
- Ashutosh Bajpai, Tom V Mathew; Development and evaluation of an interface to integrate different simulation model. International simulation conference of India (ISCI), IIT Bombay, Feb-12
- Ashutosh Bajpai, Tom V Mathew; Development of an Interface for Coupling SC and Traffic Simulator. International conference of transportation research group India (CTRG), IISc Bangalore, Dec-11

#### **CURRENT PROJECTS**

Project Details			
Platform/Project	DxP (Digital Experience Platform) https://www.wipro.com/applications/digital-experience- platform/	Duration	Jan 2017 to Present
Client	Novartis, State-street, CITI Bank, Bank of America	Team Size	20+
Project Description	Wipro Digital Experience Platform offers an "As a Service" proposition for the themes of Experience, Commerce, Content, and Automation, materializing into solutions such as Customer On boarding, Collaborative Care, Marketer, Site Rollout and many more.		
Languages/Technologies/Tools	Python, Scikit-Learn, Tensor-flow, NLTK, OpenCV, Tesseract, Word-Net, MongoDB, Keras		
Role	Data Scientist, Associate Data Science Consultant		
Responsibility	Leading POC's related to data science projects for pre sales opportunity Building and enhancing capabilities of DxP platform Assisting in client consultation process		

Project Details			
Project	DCxM (Digital Customer Experience Management) http://www.wipro.com/documents/digital-experience- platform.pdf	Duration	Sep 2015 to Jan 2017
Client	CVS, State-street, Apple, Barclays, Credit Suisse, Novartis, SBSA	Team Size	40+
Project Description	DCxM is an Experience-as-a-Service Platform. A flagship project of Wipro Technologies to provide complete solution for insights driven business along with the end-to-end digital transformation of process leveraging machine learning, NLP, smart OCR and MongoDB as its backbone.		
Languages/Technologies/Tools	Python, Scikit-Learn, NLTK, OpenCV, Tesseract, word-net, MongoDB		
Role	Data Scientist, Associate Data Science Consultant		
Responsibility	Leading POC's related to data science projects for pre sales opportunity Building and enhancing capabilities of DCxM platform Assisting in client consultation process		

## PROJECTS ARCHIEVE

Project Details			
Project	SXT Data Processing Pipeline <a href="http://meghnad.iucaa.ernet.in/~astrosat/sxt">http://meghnad.iucaa.ernet.in/~astrosat/sxt</a> specs.html	Duration	Jan 2014 to Aug 2015
Client	TIFR/ISRO/Open Source	Team Size	8+
Project Description	Soft X-Ray Telescope is one of the five payload on board of ASTROSAT (India's first astronomical mission). The SXT pipeline software is data analysis software, built on pipeline architecture. The software includes number of independent modules which implements science algorithms and data analysis requirements.		
Languages/Technologies/Tools	C++/PIL/Linux/Net beans/QDP		
Role	Scientific Officer (C)		
Responsibility	Generate the requirements of advance analysis and design FBD Development of pipeline modules, Communicate with SAC to validate and test Analysis on lab data		

Project Details			
Project	SXT Data Calibration and POC Management <a href="http://meghnad.iucaa.ernet.in/~astrosat/sxt_specs.html">http://meghnad.iucaa.ernet.in/~astrosat/sxt_specs.html</a>	Duration	July 2013 to Aug 2015
Client	TIFR/ISRO/Open Source	Team Size	4+
Project Description	Calibration describe response of instrument.SXT calibration is input to data analysis software. The quality of analysis is highly dependent upon a qualitative calibration. Calibration is time dependent and after a period of time it may change.		
Languages/Technologies/Tools	C++,JAVA,HTML/Eclipse/Linux		
Role	Scientific Officer (C)		
Responsibility	Analysis of lab data to generate requirement of basic and advance calibration Development of tools to generate calibration products Development and maintenance of local website to host calibration releases Communication with ISSDC to release these products and validate Preparation of design documents Archival & local storage, Management and organization of payload operation centre		

Project Details			
Project	CoSiCoSt-2G http://www.intranse.in/content/second-generation-cosicost	Duration	Dec 2011 to June 2013
Client	IIT Bombay/CDAC-T/DIT/Open Source	Team Size	8+
Project Description	2G-CoSiCoSt is an improvement program on the existing control strategy (Composite Signal Control Strategy) being practiced in Pune and Jaipur. The 2G-CoSiCoSt will be developed, field trailed and evaluated jointly by C-DAC, Thiruvananthapuram and IIT Bombay.		
Languages/Technologies/Tools	C++, JAVA (RMI), XML/ Net Beans, Visual Studio, Xerces		
Role	Research Associate		
Responsibility	Interaction with CDAC-T Team for efficient software process following Design weekly work plan and review for managing team Analysing the Business Requirements, High and Low Level Design. Development with ensuring the proper integration. Writing the SRS docs. Developing Modules, Procedures, and Feature Enhancements as per requirement. Making Test Cases and Providing Quality Control Support on the issues raised by CDAC-T Testing, Client. Web development and maintain release		

Project Details			
Project	SiMTraM-0.1.0 http://sourceforge.net/projects/simtram/	Duration	Oct 2010 to June 2013
Client	IIT Bombay/CDAC-T/DIT/Open Source	Team Size	7+
Project Description	"SiMTraM" Simulation of Mixed Traffic Mobility is an extension of SUMO (A Traffic Simulator Developed by DLR, Germany) for Heterogeneous traffic. This software is developed by Transportation Lab, IIT Bombay.		
Languages/Technologies/Tools	C++, XML, Python/ Eclipse, Visual Studio, Fox, Xerces		
Role	Research Associate		
Responsibility	Interaction with CDAC-T Team for technical assistance Design weekly work plan and review for team management Analysing the Business Requirements, High and Low Level Design. Development & ensuring the proper integration. Design different test cases and communicate with testing team to ensure robustness User and developer documentation of module. Providing training for new team mates and online support to users. Development and maintenance of website to release software		