

# Shantanil Bagchi

## Data Analyst

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Thorough, meticulous Data Analyst and expert Storyteller passionate about helping businesses succeed and adept at mapping out data-driven recommendations to connect dollars to business operations. Possess strong technical skills rooted in professional background as an engineer and fluent in Python, SQL, Excel, Machine Learning and Data Visualization. Experience leading teams in the development, documentation and delivery of process innovations for a leading Fortune 500 oil & gas provider.

## EDUCATION

### McGill University

M.S. (Thesis), Electrical Engineering (3.63/4.0)

Relevant Coursework: Probability, Optimization, Applied Machine Learning along with other online certifications

**Montreal, Canada**

September 2018 - Sept 2021

### YMCA University of Science and Technology

B.Tech., Electronics Instrumentation and Control Engineering (3.7/4.0)

**Faridabad, India**

August 2010 – May 2014

## SKILLS

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|--------------------------------------|--|
| <b>Data Management</b>               | Data Quality Assessment, Data Analysis, Pattern & Trend Identification, Forecasting, Visualization of Data Insights  |
| <b>Languages and Software Skills</b> | <b>Python</b> (NumPy, Pandas, Scikit-learn, TensorFlow, Keras), <b>Advanced Microsoft Excel</b> (Pivot Tables, LookUp, Formulas, VBA), <b>MySQL</b> , <b>Tableau</b> , <b>PowerBI</b> , Git, Illustrator, Azure, Troubleshooting, Modelling Machine Learning Algorithms, A/B testing |
| <b>Soft Skills</b>                   | Effective Communicator and Public Speaker, Critical Thinking, Training and Instructing, Peer Mentoring, Leadership, Project Management   |

## WORK EXPERIENCE

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|---|---------------------------------|
| <b>Data Analyst   Brainbox AI, Montreal</b>   | <i>September 2020 – Present</i> |
| <ul style="list-style-type: none"><li>Automated preprocessing pipeline for mapping team using <b>Python</b> to reduce workhour wastage by 5%.</li><li>Identifying useful data points from various building automation system (BAS) datasets. Using <b>REGEX</b>, <b>Excel lookups</b>, <b>formulas</b> to find data outliers, exceptions and relabel points to match Brainbox standards.</li><li>Analyzed existing project timeline data to identify bottlenecks in the current process. Modified existing estimation procedure to provide better time estimate for onboarding a site.</li></ul>  |                                 |
| <b>Business Intelligence Consultant (Volunteer)   Alphaa.AI, New Delhi</b>  | <i>July 2020 – March 2021</i>   |
| <ul style="list-style-type: none"><li>Implemented augmented analytics solution using NLP based <b>Alphaa.AI software</b> for three Fortune 500 companies to aid the client's digital transformation process.</li><li>Mentored 50+ professionals (Alphaa.AI fellowship program) in the skill of <b>data-driven decision-making</b> and <b>data storytelling</b> using effective visualization strategies using <b>Excel</b>.</li><li>Utilized <b>SQL</b>, <b>Power BI</b> and other dashboard/ visualization tools to build out proof of concept <b>Human Resource (HR) / people analytics</b> and <b>spend analytics</b> package from the ground up for Alphaa.AI software.</li></ul> |                                 |
| <b>Data Analyst (Volunteer)   Data for Good (NGO), Montreal</b>   | <i>July 2020 – March 2021</i>   |
| <ul style="list-style-type: none"><li>Acquired and analyzed Maison des femmes de Quebec's shelter data using <b>Python</b> and <b>Excel</b> to prepare reports that interpret shelter-seeker behavior, stay duration and various other indicators.</li><li>Developed dynamic management dashboard in <b>Excel</b> for the leadership team of Maison des femmes de Quebec. Communicated with key stakeholders to share actionable insights to support their future goals.</li></ul>  |                                 |

- Conducted a thorough analysis of 200k+ NCC (National Conservatory of Canada) donor data to identify loyal donors and recommended strategies to NCC to maintain and expand their donor base using **Excel**.

### Senior Engineer | GAIL India LTD, New Delhi

September 2014 – August 2018

- Led a team of 10+ engineers on a \$40M project to revamp an existing process plant unit improving plant performance by 8% and reducing downtime.
- Automated departmental purchase order pipeline, as well as developed a spend and procurement management dashboard in **Excel** using **VBA automation**. Achieved 5% reduction in workhour wastage by implementing automated contract renewal reminders.
- Prepared reports after identifying and analyzing procurement data from **MS Access** to identify prospective avenues of expenditure reduction, new competitors etc.
- Successfully conducted cybersecurity threat research on plant control systems. Directed the creation of a policy development plan for subsequent implementation aiding the digital transformation goal.
- Other responsibilities included material management, vendor communication, contract negotiation, raising purchase requisitions, modification project planning and execution, Site Acceptance Test (SAT) etc.

## PROJECTS

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### Marketing Campaign Analysis - Competition Winner (Maven Analytics)

- Identified, analyzed and converted marketing data into actionable insight by proposing several recommendations for targeting new customers and activating existing customer base.
- Judged one of the **joint winners** by Maven Analytics panel (Chris Dutton, John Pauler etc.)

### MakeoverMonday (Tableau Community)

- Showcased several creative data stories using various datasets provided weekly to the Tableau community.
- Week 2, 2021 entry had been selected among the **top entry** by Andy Kriebel and Eva Murray (Zen Masters)

### Modified MNIST image classification (University Project)

- Implemented state-of-the-art models such as multilayer **CNN**, **VGG**, **ResNet**
- Designed the preprocessing pipeline using **OpenCV** for modified MNIST dataset, with 3 handwritten digits in each image (random rotation and skewness) to obtain the largest digit.
- Ranked in the Top 3 in the in-class Kaggle competition with accuracy of 97.7% using an **ensemble** of above models.

### Generative Adversarial Networks - GAN (University Project)

- Implemented **Deep Convolution GAN** and **Wasserstein GAN (WGAN)** to improve the stability of vanilla GAN and compared the results by generating data using CIFAR10, MNIST, Fashion MNIST and Flower Datasets.
- Performed ablation studies for optimizers like **Adagrad**, **ADAM**, **SGD**, **RMSProp** to achieve the lowest Discriminator loss.

### Object Image classification – Hackathon Finalist

- Implemented multilayer perceptron, CNN and **transfer learning** using **VGG** and **InceptionResNetV2** in Python using **TensorFlow** API and **Keras**.
- Designed the preprocessing pipeline using **OpenCV** and **Image Data Generator** to augment the dataset. Achieved 99.23% accuracy on the test dataset.

## ACADEMIC EXPERIENCE

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### Teaching Assistant | McGill University

September 2019 – December 2020

- COMP208 (Computer Programming for Engineering and Physical Sciences)- Delivering tutorials and lab sessions to teach **Python** to a class of 250+ students.