Arkaprava Sinha | Data Scientist

Accenture AI
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Education

Program	Institution/Board	%/CGPA	Year
M.Sc. Data Science	Chennai Mathematical Institute *Chennai, Tamil Nadu*	**9.02/10**	2018-20
B.Sc. (Hons.) Statistics	Calcutta University *Kolkata, West Bengal*	**64%**	2015-18
Senior School (AISSCE)	Delhi Public School, Ruby Park *Kolkata, West Bengal*	**90.2%**	2013-15

Experience

Chennai Mathematical Institute **Nov 2022 - Present**
Teaching Assistant

- Teaching Assistant to Computer Vision Course at Chennai Mathematical Institute
- Mentoring Students on Computer Vision Projects
- Contributing to Course Material

Accenture AI **Nov 2021 - Present**
Data Scientist

- Generating Insights from thousands of Earning Transcripts of companies using Natural Language Processing
- Contribution to a Library of Algorithms for Accenture AI

Larsen and Toubro Infotech **July 2020 - Nov 2021**
Data Scientist

- Building Industry solutions using Image Processing and Computer Vision
- Reviewing Machine Learning and Deep Learning Products

Teradata India Pvt. Ltd. **May 2019 - July 2019**
Data Science Intern

- Implementation of Topic Modeling Frameworks for Teradata MLE
- Research on new approaches to Clickstream Analysis

Tata Steel India Ltd. **June 2018 - July 2018**
Intern

- Worked on the application of Data Analytics in HR
- Built a model to predict employee attrition based on Qualification, Experience, Age and Level of employees

Key Projects

1. *SinGAN: Image Generation from a Single Image* **July 2021 - September 2021**
(Guide: Dr Deepak Gupta (University of Amsterdam)) *Personal Project*

- Worked on Single Shot Image Generation
- Explored capabilities of Vision Transformers to replace the Convolution Operations to utilise Global Information for feature generation
- *Keywords: Computer Vision, Transformers, GAN*

2. *Intrusion Detection on an Edge Device* **December 2020 - March 2021**
(Data Scientist) *Larsen and Toubro Infotech*

- Built an end-to-end Computer Vision product from data capture to deployment on an Edge Device.

- The project analysed videos real-time to alert users when a human appeared in a restricted area even in low light conditions.
- *Keywords: Computer Vision, Object Detection, IoT Edge Device*

3. *Smart Traffic System* **December 2020 - March 2021**
(Data Scientist) *Larsen and Toubro Infotech*

- Built an end-to-end Computer Vision solution.
- The project analysed videos real-time to alert users when a human appeared in a restricted area even in low light conditions.
- *Keywords: Computer Vision, Object Detection, IoT Edge Device*

4. *Estimating Option Prices using Deep Neural Networks* **January 2020 - March 2020**
(M.Sc. / Guide: Prof. Anindya Goswami (IISER, Pune) *Chennai Mathematical Institute*

- Literature Review on Option Pricing using Deep Learning techniques
- Performed Experiments on the State-of-the-art
- My contributions were a valuable part of a long term project which eventually led to a paper ('DATA-DRIVEN OPTION PRICING USING SINGLE AND MULTI-ASSET SUPERVISED LEARNING', International Journal of Financial Engineering), where my efforts have been acknowledged.
- *Keywords: Option Pricing Theory, Deep Learning*

Course Projects

1. *Neural Style Transfer* **August 2020**
(M.Sc. / Guide: Prof. Rukmini Vijaykumar) *Chennai Mathematical Institute*

- Used Pre-trained VGG19 model to transfer the 'Style' of one image to the 'content' of another.

2. *Sentiment Analysis on Product Reviews Using RNNs* **April 2020**
(M.Sc. / Faculty: Prof. Ramaseshan Ramachandran) *Chennai Mathematical Institute*

- Built an RNN from Scratch for analysing the polarity of a multi-sentence review

3. *High Frequency Time Series Analysis* **November 2019**
(M.Sc. / Faculty: Prof. Sourish Das) *Chennai Mathematical Institute*

- Worked on Hourly Energy Consumption Data. Predicted future Energy Consumption for identifying possible surges.

Course Work

Data Science Courses **August 2018 - April 2020**
(Core and electives) *Chennai Mathematical Institute*

- Computer Vision
- Deep Learning
- Probability and Statistics with R
- Reinforcement Learning
- Natural Language Processing
- Machine Learning
- Discrete Mathematics
- Regression and Classification

Statistics Courses **July 2015 -April 2018**
(Core and electives) *Calcutta University*

- Statistical Inference
- ANOVA and ANCOVA
- Time Series Analysis
- Statistical Quality Control
- Testing of Hypothesis
- Linear Algebra
- Multivariate Analysis
- Economics

Technical Skills

- Programming Languages: Python, R, C++
- Packages: PyTorch, Tensorflow, OpenCV, ScikitLearn
- Softwares: Minitab, SPSS
- Operating System: Windows, Linux