

# Savinay Shukla

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## EDUCATION

### New York University

Master of Science in Computer Engineering

Brooklyn, NY

Sep 2022 – May 2024

- Relevant Coursework: Machine Learning, Deep Learning, High Performance Machine Learning

### Manipal University Jaipur

Bachelor of Technology in Information Technology

Jaipur, India

Jul 2015 – Jul 2019

- Relevant Coursework: Data Science, Data Structures and Algorithms, Operating Systems

## EXPERIENCE

### Graduate Teaching Assistant

NYU Center for Data Science

New York City, NY

Jan 2023 – Present

- Spearheading support in implementing advanced deep learning systems within distributed environments using **High-Performance Computing (HPCs)**
- Guided 40 graduate students in the implementation of **TensorFlow and PyTorch** applications on HPC clusters
- Curated course content on the use of **NumPy, Pandas**, and Numba in data science and scientific computing

### Software Engineer

IBM

Bengaluru, India

Dec 2019 – Aug 2022

- Led successful migration of legacy Apache Struts 2 web application to **Spring microservices**, enhancing scalability and performance
- Boosted database read performance by analyzing queries, optimizing key columns for indexing, and achieving a 30% reduction in read time for improved efficiency
- Awarded “**IBM Gold Champion Learner - 2020**” recognition for a continuous learning initiative

### Data Science Intern

Morning Blaze Pvt. Ltd.

Pune, India

Feb 2019 – Jul 2019

- Engineered a **ETL pipeline** for extracting market indicators (commodities, forex, global markets), enhancing predictive modeling for BSE automotive stock opening prices
- Implemented **lightweight time-series models**, integrating market and technical indicators to boost accuracy
- Conducted comprehensive research on historical data, ensuring incorporation of extensive indicators to effectively capture stock market downturns
- Optimized the engine across 300+ BSE companies, resulting in an impressive **5% reduction** in prediction losses

## CERTIFICATIONS AND BADGES

**IBM Data Science Professional** | Authorized by IBM

Dec 2021

**IBM AI Associate** | Authorized by IBM

Aug 2021

- Demonstrated proficiency in data science, utilizing **Jupyter notebooks, Python, SQL**, and relevant libraries for solving real-world problems

## PROJECTS

**Distributed Dual-Discriminator GANs** | Pytorch, Generative Models, HPC

Apr 2023 – May 2023

- Optimized DCGAN training pipeline by introducing an extra discriminator for faster convergence
- Realized a **40% reduction** in time for optimal FID and IS Scores across CIFAR, MNIST, and SVHN datasets
- Implemented a **parameter-server** architecture for distributed, **multi-GPU** training to scale the prototype

**ClearView - Lightweight Dehazenet** | PyTorch, Computer Vision

Mar 2023 – May 2023

- Revamped the Dehazenet architecture by incorporating efficient depth-wise separable convolutions
- Attained on par model performance with **less than 2000** trainable parameters and 8MB model size

## TECHNICAL SKILLS

**Languages:** Java, Python, C/C++, R, SQL, NoSQL, MongoDB, JavaScript, TypeScript, HTML, CSS

**Data Science :** Data Analysis and Visualization, Statistics, Predictive Modeling, Feature Engineering, EDA, ETL

**Machine Learning :** Neural Networks, Computer Vision, Natural Language Processing, Time Series Analysis

**Frameworks :** Pytorch, Azure, Docker, REST, AWS, GCP, Cassandra, Kafka, Git, Kubernetes