

# SAGNIK BISWAS

Data Science Enthusiast

M.Sc. in Big Data Analytics, RKMVERI, Belur, Howrah, India

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Belur, Howrah, India



## EXECUTIVE SUMMARY

Data Science enthusiast pursuing M.Sc. Big Data Analytics at RKMVERI with expertise in distributed computing and machine learning applications. Demonstrated proficiency in developing scalable CNN architectures using PyTorch & Ray framework, and implementing ASR models for Bengali-English code-switching applications. Strong analytical foundation with research capabilities and practical implementation experience in statistical modeling.

## PROJECTS

- **Distributed CNN with Ray & PyTorch: Scalable Deep Learning Implementation**  
**Tools:** Ray Framework, PyTorch *Recent Project*  
Architected distributed convolutional neural network across multiple nodes using Ray and PyTorch, achieving training efficiency and demonstrating scalable deep learning capabilities
- **Bengali-English Code-Switching ASR: Multilingual Speech Recognition**  
**Keywords:** OpenAI Whisper, Custom Dataset, ASR, Code-switching *Recent Project*  
Fine-tuned OpenAI Whisper Small model on custom-made Bengali-English dataset, enhancing multilingual speech recognition accuracy for low-resource language applications
- **Advanced Salary Prediction Analytics: Statistical Modeling & Compensation Analysis**  
**Keywords:** Regression Analysis, Feature Engineering, Cross-validation  
Conducted comprehensive regression analysis employing multiple statistical techniques, feature engineering, and cross-validation for compensation analytics

## FREELANCING EXPERIENCE

- **Online Physics Tutor**  
**Private Client, Siliguri** *Jan.'24 - Mar.'24*
  - Delivered comprehensive online physics instruction for Class 8 student with measurable academic improvement
  - Developed customized pedagogical approaches adapted to individual learning requirements
  - Implemented interactive methodologies enhancing student engagement and concept mastery
- **Mathematical Modeling Consultant**  
**Academic Contract, Siliguri** *Sep.'22 - Oct.'22*
  - Executed mathematical modeling solutions using Desmos and GeoGebra platforms
  - Produced comprehensive technical documentation with detailed analytical insights
  - Collaborated with academic clients delivering solutions within specified timelines

## COURSEWORK

- **RKMVERI**
  - Deep Learning
  - Natural Language Processing
  - Computer Vision
  - Artificial Intelligence
  - Time Series & Survival Analysis
  - Machine Learning
  - Statistics
  - Econometrics & Finance
  - Reinforcement Learning
  - Distributed Computing

## EDUCATION

- **Ramakrishna Mission Vivekananda Educational and Research Institute, Belur**  
**M.Sc. in Big Data Analytics**
  - 📅 2024 – Started Expected: July 2026
- **Salesian College, Siliguri**  
**B.Sc.(Hons.) in Mathematics**
  - 📅 Completed July 2023

## TECHNICAL SKILLS

- **Programming:** Python
- **ML & AI:** Scikit-learn, PyTorch
- **Distributed Computing:** Ray Framework, PySpark
- **Data Science:** Pandas, NumPy, Matplotlib, Seaborn, Plotly
- **Statistical Methods:** Regression Analysis, Hypothesis Testing, Statistical Modeling
- **Tools:** Git, Jupyter, Linux, Google Colab

## ADDITIONAL QUALIFICATIONS

- **Languages:** Bengali (Native), English (Professional), Hindi (Conversational)
- **Core Competencies:** Research Methodology, Technical Documentation, Problem-Solving, Team Collaboration
- **Interests:** Bengali and English Literature, Emerging Technologies & Technical Research, Playing Badminton

## ACHIEVEMENTS

- **First Place Winner** – Students' Seminar & Poster Presentation (presented on Stirling Numbers)