# SAGNIK BISWAS

Data Science Enthusiast

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### **EXECUTIVE SUMMARY**

Data Science enthusiast pursuing M.Sc. Big Data Analytics at RKMVERI with specialized expertise in distributed computing and advanced 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.

### ACADEMIC CREDENTIALS

Bachelor of Science (Honours) in Mathematics Completed Salesian College, Siliguri July 2023

### PROFESSIONAL EXPERIENCE

Online Physics TutorContractPrivate Client, SiliguriJanuary 2024 – March 2024

- 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 Freelance Academic Contract, Siliguri September 2022 – October 2022

- Executed mathematical modeling solutions using Desmos and GeoGebra platforms
- Produced comprehensive technical documentation with detailed analytical insights
- $\bullet$  Collaborated with a cademic client(s) delivering solutions within specified time lines

### TECHNICAL PROJECTS

### Distributed CNN with Ray & PyTorch

 Architected distributed convolutional neural network across multiple nodes(two) using Ray and PyTorch, achieving training efficiency and demonstrating scalable deep learning capabilities

### Bengali-English Code-Switching ASR

• 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**

Conducted comprehensive regression analysis employing multiple statistical techniques, feature engineering, and cross-validation for compensation analytics

### TECHNICAL EXPERTISE

**Programming:** Python

 $\mathbf{ML}$ &  $\mathbf{AI:}$  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

### **ACHIEVEMENTS & RECOGNITION**

• First Place Winner – Students' Seminar & Poster Presentation on Stirling Numbers

## ADDITIONAL QUALIFICATIONS

**Languages:** Bengali (Native), English (Professional), Hindi (Conversational)

Core Competencies: Research Methodology, Technical Documentation, Problem-Solving, Ability to work in a team

**Interests:** Bengali and English Literature, Playing around with emerging technologies & Technical Research, Playing badminton