# DARPAN BHATTACHARYA

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

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### **PROJECTS**

• Know Your Food: Food Identification and Nutritional Analysis Application Guide: Prof. C.V. Jawahar IASc-INSA-NASI SRFP 2025

Skills: PyTorch, OpenCV, Vue.js, FastAPI May '25 - Present, IIIT Hyderabad

• Developing a computer vision-based application for Indian food identification and nutritional analysis.

ChessLens: Automatic Chess Move Detection using Computer Vision

Faculty: Br. Bhaswarachaitanya Computer Vision (CS342) Skills: PyTorch, OpenCV Jan '25 - Apr '25, RKMVERI

• Designed and implemented a system to automatically detect chess moves from board images using CV techniques.

• K8sCIFAR: Distributed Model Training using K3s

Faculty: Mr. Champak Dutta Graph DB & Distributed Computing (DA244) Skills: Docker, K3s Jan '25 - Apr '25, RKMVERI

• Employed K3s to enable distributed data-parallel training of models on the CIFAR-10 dataset.

Rhythms of the Mind: Impact of Music Tastes on Mental Health

Machine Learning (CS230) Faculty: Br. Bhaswarachaitanya Aug '24 - Nov '24, RKMVERI Skills: Python, EDA

• Analyzed the impact of an individual's music tastes on their mental health.

Achieved 76.7% accuracy using Softmax Regression.

• Personality Prediction from Bangla Handwriting

Guide: Dr. Chavan Halder B.Sc. Final Year Project Jan '24 - Apr '24, RKMVCC Skills: Python, OpenCV

• Predicted Big Five personality traits from handwritten Bangla text.

• Reached a minimum RMSE of 0.15 using a Random Forest Regressor.

• Automated Bangla Character Extraction from Data Forms

Guide: Dr. Kaushik Roy Internship Skills: Python, OpenCV Sep '22 - Feb '23, WBSU

• Developed an automated pipeline to extract Bangla characters from isolated form entries using image processing.

## **COURSEWORK**

- Data Structures and Algortihms (CS110)
- Machine Learning (CS230)
- Statistics with R (DA102)
- **Probability and Stochastic Processes** (DA104)
- Java and Hadoop (DA110)
- Linear Algebra and Matrix Computation (DA109)

- Advanced Statistical Methods (DA210)
- Time Series and Survival Analysis (DA312)
- Deep Learning and NLP (DA345)
- Graph Database and Distributed Computing (DA244)
- Computer Vision (CS342)

## **ACHIEVEMENTS**

• Selected for Science Academies' Summer Research Fellowship Program '25, '23

• Winner, Turing Show - Inter-college programming contest, RKMVERI '24, '23

Winner, Codethesis – Inter-college programming contest, GNIT Kolkata '24, '23

**Top 2000**, Meta Hacker Cup (among  $\sim$ 20k participants) '23, '22

• Winner, Codefiesta - Inter-college programming contest, BESC Kolkata '22

'20 Qualified Zonal Computing Olympiad (ZCO) (top 100 / ∼8k participants)

• Regionalist, ICPC for Schools (Gwalior-Pune Onsite) 19

• Codeforces: Expert (top  $\sim$ 7% globally), CodeChef: 5 star (top  $\sim$ 6% globally)

### **EDUCATION**

• Ramakrishna Mission Vivekananda Educational and Research Institute (RKMVERI), Belur

M.Sc. in Big Data Analytics

**2024** - Present (expected 2026)

• Ramakrishna Mission Vivekananda Centenary College (RKMVCC), Rahara

**B.Sc.** (Hons.) in Computer Science

**2021 - 2024** CGPA: 9.09

Don Bosco School, Liluah

ISC, ICSE

**2008 - 2021** ISC: 93.25%, ICSE: 93%

### **EXPERIENCE**

#### **Summer Intern**

#### **IASc-INSA-NASI SRFP 2025**

**May** '25 - Jul '25

CVIT, IIIT Hyderabad

Computer Vision Advisor- Prof. C.V. Jawahar

#### Summer Intern

#### **IASc-INSA-NASI SRFP 2023**

May '23 - Jul '23

IISc Bengaluru

Theory CS Advisor- Prof. L. Sunil Chandran

#### Research Intern

**Sep** '22 - Feb '23

WBSU, Kolkata

Computer Vision

Advisor- Prof. Kaushik Roy

## SKILLS

- Programming: C, C++, Java, Python, R, SQL, HTML, CSS, JavaScript
- Other Technologies: Linux, Hadoop, Kubernetes, Neo4j, PyTorch, OpenCV, Git, LaTEX, Jupyter Notebook, Vue.js, FastAPI
- Languages: English (fluent), Bangla (native), Hindi (intermediate)

### VOLUNTEERING

• Volunteer, Perceptron - RKMVERI Tech Fest Dept. of CS, RKMVERI Jan '25

• Co-organizer, Problem Setter and Tester, Nirdesh -**RKMVCC Tech Fest** Oct '23 Dept. of CS, RKMVCC

• Co-organizer, Problem Setter and Tester, Neuroverse programming contest Dept. of CS, RKMVCC Apr '23

## **HOBBIES**

• Competitive Programming, Chess