

BISHAL SINGHA

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EDUCATION

Bachelor of Technology in Information Technology
Jalpaiguri Government Engineering College (Autonomous)

2015 – 2019
GPA: 8.46/10

AREAS OF INTEREST

• Data Analytics • Machine Learning (ML) • Deep Learning (DL) • Time Series Analysis • Data Science

WORK EXPERIENCE



BUSINESS DEVELOPMENT ASSOCIATE
MediaKrafts

Mar'24 – Present
Noida, India

- Identified and developed strategic partnerships to expand client networks and reinforce brand presence.
- Executed digital marketing campaigns using Google Ads and social media platforms for targeted client outreach.

WEB DEVELOPMENT INTERN
MediaKrafts

Jul'23 – Present
Noida, India

- Redesigned *MediaKrafts.com*  and *Arsedevils.com*  for faster loading, scalability, and improved user experience.
- Enhanced usability and efficiency for both websites, reducing server load and increasing visitor retention.

PROJECT ASSOCIATE
Helicopter Lab, IIT Kanpur

Nov'19 – Apr'20
Kanpur, India

- Worked on designing a swarm of UAVs for remote location disaster management, sponsored by Indian Air Force.
- Used Robot Operating System (ROS) and autopilot PX4 for monitoring and controlling the UAVs.
- Built a custom web-based Ground Control System (GCS) UI for UAV control.

PROGRAMMER ANALYST
Cognizant

Jul'19 – Oct'19
Chennai, India

- Learned JavaScript, MongoDB, and Angular as a Programmer Analyst trainee.
- Built and demonstrated an online platform for Massive Online Open Courses (MOOCs).

SUMMER INTERN
Computer Lab, BIT Mesra






Jun'18 – Jul'18
Mesra, India

- Analyzed raw data collected from IMD, and used feature engineering and PCA for dimensionality reduction.
- Utilized Support Vector Machines, Linear Regression, Decision Trees, and K-Nearest Neighbors to predict thunderstorm occurrences in the Ranchi district, achieving an **accuracy of 78%**.

TECHNICAL SKILLS

| | |
|---------------------|--|
| DATA SCIENCE | Data Analysis, Data Visualization, Data Cleaning, Data Exploration |
| PROGRAMMING | Python, R, SQL, Javascript, HTML, CSS, \LaTeX |
| PACKAGES | Tensorflow, Scikit-learn, Darts |
| MANAGEMENT | Agile Methodology, Scrum, Project Planning |

SELECTED COURSEWORK

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|-----------------------|--|
| CORE COURSES | Discrete Mathematics Data Structure Analysis of Algorithms Data Warehousing and Data Mining Object Oriented Programming Database Management System |
| CERTIFICATIONS | Google Advanced Data Analytics  Google Data Analytics  Google Project Management  Statistics with R Specialization  AWS Cloud Technical Essentials  |

PROJECTS

AESEAR – PERSONAL BLOG

Feb'24 – Present

- Building a blog focused on productivity and mental health, using content strategy and SEO to boost engagement.
- Managing content creation, editing, design, and analytics to enhance user experience and engagement.

PREDICTING US STOCKS CLOSING MOVEMENTS

Oct'24 – Present

- Implemented and optimized XGBoost, LightGBM, and MLP model ensemble, achieving an **MAE of 5.361**.
- Developing models for time-series trading data, utilizing data preprocessing and feature engineering techniques, like Price Spread, Imbalance Ratio, rolling means, cumulative bid sizes, and VWAP skewness.

STORE SALES – A STUDY IN TIME SERIES

Aug'24 – Oct'24

- **Ranked 3rd** out of **732 teams** on Kaggle leaderboard with a Root Mean Squared Logarithmic Error of **0.3786**.
- Built and optimized **ensemble models** using **XGBoost**, **LightGBM**, and **TiDE**, leveraging advanced time series techniques, including past covariates, future covariates, and lag features, to improve **forecasting accuracy**.

PERSONAL PORTFOLIO DESIGN

Jan'24 – Mar'24

- Built a dynamic portfolio using **HTML**, **CSS**, and **JavaScript**, showcasing projects in a responsive interface.
- Implemented web design practices for optimal performance, cross-browser compatibility, and mobile use.

INTRUDER DETECTION THROUGH WEBPAGE SESSION TRACKING

Aug'23 – Oct'23

- **Ranked 37th** out of **5521 teams** on Kaggle leaderboard, achieving **Test ROC AUC of 0.96879** using LightGBM for model training.
- Boosted **F1 score** from **0.66 to 0.91** in classification by addressing imbalance with downsampling and weighting.

PREDICTING FLIGHT DELAYS

Sep'22 – Dec'22

- **Ranked 2nd** on the leaderboard as measured by a **ROC AUC of 0.93715** using a tuned **CatBoost** model.
- Leveraged Random Forest to generate new features to **classify delayed flight**, improving AUC in a highly imbalanced dataset by utilizing class weights and implementing a custom focal loss function.

FEEDBACK PRIZE – PREDICTING EFFECTIVE ARGUMENTS

Feb'22 – Aug'22

- Accomplished an **accuracy of 83.46%** in the Kaggle competition, by classifying argumentative elements in student writing as using **Bayesian optimization** with **LightGBM**.
- The multi-class classification model was trained on data representative of the 6th-12th grade U.S. students.

FACIAL EMOTION DETECTION

Mar'21 – Aug'21

- Achieved **66% accuracy** in emotion detection using **MobileNetV2** through transfer learning.
- Used image data generator to address dataset imbalance, and experimented with pre-trained **ResNet50**, **Xception**, and **EfficientNet** backbones.

FAKE NEWS DETECTION

Feb'19 – Apr'19

- Achieved **99.6% accuracy**, surpassing the Kaggle leaderboard, using **XGBoost** with **GridSearchCV** for tuning.
- Explored Logistic Regression, SVM, Random Forest, LSTM, and various bagging and boosting techniques.

POSITIONS OF RESPONSIBILITY

PLACEMENT COORDINATOR, STUDENT PLACEMENT CELL

2018 – 19

- Facilitated connections with prospective companies and organized campus job fairs, leading to a **50% increase** in student placements

SECRETARY, LITERARY SOCIETY

2018 – 19

- Organized interactive sessions for interviews and workshops by industry professionals to improve soft skills.

VOLUNTEER MEMBER, CODERS CLUB

2017 – 19

- Mentored 200 freshmen on solving algorithmic problems in competitive coding.

MENTOR, JYOTI

2016 – 19

- Mentored underprivileged children during night school organized by our college.