

# Kushagra Agrawal

## Data Scientist

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### PROFILE

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I am a budding Data Scientist with practical experience in building full-stack data science projects. I have hands-on expertise in leveraging machine learning, data analysis, and visualization techniques to solve real-world problems. I have a growing understanding of mathematics, statistics, and programming for data-driven decision-making.

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### PROJECTS

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#### Network Security Detection [GitHub Link](#)

- Designed and implemented a robust ML pipeline to detect phishing websites using scikit-learn, achieving efficient data preprocessing, model training, and evaluation.
- Built a custom exception handling system for better debugging and error traceability, ensuring smooth functionality across the project.
- Processed and validated structured data using YAML schema, ensuring accuracy and consistency of 30+ features for model input.
- Conducted hyperparameter tuning using GridSearchCV, improving model performance and precise evaluation metrics like  $R^2$  scores.
- Integrated dynamic logging to monitor runtime events and implemented modular utilities for saving/loading objects, YAML files, and NumPy arrays.

#### Customer Risk Analysis (PowerBI Dashboard) [GitHub Link](#)

- Built a **Customer Risk Analysis Dashboard** for a financial services firm to assess customer creditworthiness and fraud risks.
- Utilized **Power BI** to create an interactive dashboard featuring **dynamic visuals** such as heatmaps, bar charts, and filters for deep dives into customer segments.
- Incorporated risk scores using statistical models, clustering algorithms, and key metrics like **credit risk rating**, **debt-to-income ratio**, and default probability.
- The dashboard facilitated a **30% reduction in manual risk evaluation time**, enabling quick identification of high-risk customers.

#### Jarvis Voice Assistant [GitHub Link](#)

- Developed a **voice-controlled personal assistant, Jarvis**, to perform routine tasks and provide real-time information.
- Built using **Python** with integrations of **speech recognition** (Google Speech-to-Text API) and **text-to-speech** (pyttsx3) libraries.
- Enabled features such as **web search**, **email sending**, **weather updates**, and opening system applications through voice commands.
- Utilized **Natural Language Processing (NLP)** to interpret user intents and respond conversationally.
- Integrated **APIs** for retrieving data such as news, weather, and current events dynamically.
- Enhanced productivity by **automating repetitive tasks** and offering personalized assistance.

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## EDUCATION

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**Bachelor's Degree**, *Amity University, Noida*;

July 2024–July 2024  
Noida, Uttar Pradesh

- Relevant Coursework: Algorithms and Data Structure, Database Management System, Operating System, Computer Network, Linear Algebra, Discrete Mathematics, Fuzzy Logic and Big Data

**Schooling**, *Agarwal Vidya Vihar; Surat*;

2012 – 2024  
Surat, Gujarat

- Relevant Coursework: Communication, Probability and Applied Statistics, Python Programming, Life Ethics

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## Publications

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- **My Data Science Learnings So Far** (11/2024)
- **Struggles in My Data Science Journey** (08/2024)
- **My Journey into the World of Data** (08/2024)

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## SKILLS

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Machine Learning | Python | MySQL | PowerBI | Statistical Analysis | Microsoft Excel | Exploratory Data Analysis | Feature Engineering | Mathematics | Communication

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## INTERESTS

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Playing Badminton, Chess | Writing Tech Blogs | Traveling | Reading Books

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