# Harshit Khandelwal

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### **EDUCATION:**

# **Master of Science in Data Science**

Aug 2021 - May 2023

Indiana University Bloomington | Bloomington, IN, U.S.A

**GPA**: 4.0/4.0

**Courses**: Advanced Database systems, Machine Learning, Deep learning Systems, Statistics, Big Data Applications, Computer Vision, Applied Algorithms, Image processing in medical Applications, Information Visualization

### **Bachelor of Technology in Computer Science Engineering**

Guru Gobind Singh Indraprastha University | Delhi, India

Aug 2015 – May 2019

**CGPA**: 8.26/10.0

### **WORK EXPERIENCE:**

# Data Scientist (Credit Risk) Intern | Simpl Inc. | San Diego, USA

May 2022 - Jan 2023

- Developed and implemented a predictive credit risk model that reduced default rates by 78.8%. Achieved SLA of sub-50ms response times, and ensured prompt detection and blocking transactions with advanced MLOPs techniques.
- Achieved an impressive AUC of 83% with the Random Forest model, as verified by a control set, resulting in a reduction in delinquency by 5%.
- Handled & analyzed data from multiple sources (size 500 TB+)(using SQL), to investigate and identify potential fraud cases, including account takeover, money laundering, or other financial crimes, saving millions of funds.
- Created data visualization dashboards to monitor credit risk exposure and presented findings to senior management, facilitating informed decision-making and risk mitigation strategies.
- Tech Stack: AWS, Redshift, Sagemaker, Python, Scikit-learn, Pandas, DASK, Tableau, Qlik Sense.

### IT Business Analyst | Accenture | Gurugram, India

**Aug 2019 – Aug 2021** 

- Conducted system wide analysis and defined problems & issues along with proposals of adequate solutions.
- Developed API's along with system integration and File management for application.
- Lead a team using Agile & Scrum methodologies for migrating application database from Mongodb to SQL.
- Developed an **automation module (C#)** to catch preemptive bugs and helped to avoid large sale breakdown.
- Received 2 **prestigious awards** for my work and dedication to and for Accenture.
- Tech Stack: Azure, AWS S3, .Net core, C#, Python, SQL and MongoDB.

#### Data Scientist Intern | Unique | Gurugram, India

June 2019 - Aug 2019

• Worked with the CEO to develop analytical and predictive models/systems for large scale mechanical machines using draft and testing data for field deployment. Monitoring system using Tableau.

### **SKILLS:**

Computer Languages: Python | R | C++ | Java | SQL | MongoDB | JavaScript | C# | VBA

Al/Data Science : Machine Learning | Deep Learning | Computer Vision | Data Mining | Data Viz | Pandas | R Shiny | scikit-learn

Software & Python : Excel | Git | IPython | Jupyterlab | AWS | Tensorflow | NetworkX | Pytorch | NLTK

Others: SAP | Oracle | SAS | Spark | Hadoop | Hive | .Net Core | Power BI | Tableau | Docker | Spark | Scala

### **PROJECTS:**

# Scalable Machine Learning in C++ (CAMEL) (Link: <a href="https://github.com/camelml/camel">https://github.com/camelml/camel</a>)

- Created a library that is purely developed in C++. On analysis of performance metrics between Compiled vs Interpreted Languages showed a significantly improved result and favor towards compiled languages.
- Used the Scientific library 'Armadillo', which helped us boost the performance of the algorithms by approx. 23%.

# Recommendation Engine Project (Link: <a href="https://github.com/coderop2/recommendation-system">https://github.com/coderop2/recommendation-system</a>)

- Implemented Simple Generic Recommender, the Content Based Filter and the User Based Collaborative Filter. 'Surprise' library is being used which implements extremely powerful algorithms like Singular Value Decomposition(SVD) to minimize RMSE. This project was developed for forecasting movies & music data.
- Data scraped from TMDB API. Dummy & gradient boosting classifiers used as predictors for success of movies.

# Satellite Image Segmentation (Link: https://github.com/coderop2/Satellite image segmentation)

- Developed and Implemented a modified UNet architecture for the satellite image segmentation for segmenting the image into one or many of the classes, achieving an average IOU of 0.81 over the whole dataset.
- The 7D spatial encoded matrix from the segmentation model was used for natural event detection(like Landslide, Forest fire etc.). Achieving an 1.7% better result from state of the art implementation.