

# Vibhor Singh

**GitHub:** <https://github.com/iamvibhorsingh>

**LinkedIn:** <https://linkedin.com/in/iamvibhorsingh>

**E-mail:** [vibhorsingh@nyu.edu](mailto:vibhorsingh@nyu.edu)

---

## WORK EXPERIENCE

### **Data Integration Engineer - June 2021, at Fastenal.**

- I automated critical workflows, including **MongoDB** Atlas project and Cluster provisioning, resulting in a 95% reduction in end-to-end issue resolve time and huge annual savings by saving precious Engineer hours. Leveraging **Azure DevOps** and **Terraform**, I built the entire end-to-end pipeline from scratch. I also wrote **JavaScript** triggers for some databases, resulting in a 20% increase in query performance.
- I developed end-to-end Kafka applications (in Java) that consumed data from multiple databases, reducing data processing time using **Kafka Streams**. I also work closely with cross-functional teams to integrate various source systems with Kafka using **Kafka Connect** and **Oracle GoldenGate (SQL)**, resulting in a 60% reduction in integration time compared to other conventional methods.
- Completing Confluent's official Kafka admin, developer, and security certification courses improved my expertise, resulting in a 40% reduction in troubleshooting time.
- My involvement in updating our **Kafka infrastructure** (making changes to on-prem Kafka clusters via **Puppet**, adding VM's) led to a 60% reduction in infrastructure downtime.

### **Summer Analyst - June 2020 – July 2020, at Jefferies.**

- Built an **outlier detection model using machine learning** for generating alerts based on **dynamic thresholds for login failures** based on more than **1 billion past records** in Splunk which is now a part of the company's dashboard system for **monitoring cyber activity globally** (SIEM) thus reducing any manual intervention and saving time, money, and effort.
- Underwent AWS training that exposed me to various cloud infrastructure offerings like **S3, EC2 and Lambda**.

## SKILLS AND INTERESTS

- **Technical Skills:** *Python, Kafka, Kafka Streams (Java), KSQL, Terraform, Puppet, Red Hat Satellite, Azure, Splunk, Deep Learning, Machine Learning, Hadoop, Spark, Data Visualization (Tableau and D3.js), JavaScript, MS-SQL, SQL.*

## PROJECTS

### **Human detection in floods using MaskRCNN**

—Inspired by 2018 disasters in Uttarakhand and Kerala. Remodeled a state-of-the-art algorithm, MaskRCNN, to detect humans in flood affected areas and to compute how well it works in Real-life situations (performance on video).

### **Mercury Telemetry Application**

—Mercury is an open-source telemetry system designed for College Motorsports team. I was in the Backend team and worked on developing the Django application and using SymmetricDs to synchronize database onboard moving vehicle and our application database over the internet.

### **Stock Market Prediction**

—Developed a platform that consumed historical quotes data (via the Alphavantage API) and tweets (via Twitter's API) and performed sentiment analysis using TextBlob. Stored data in MongoDB and exported to AWS S3. Then trained the SparkML model on this server and exposed it via a REST API, which was used to predict the future close price for a stock over a time interval, helping determine whether to buy or sell it.

### **Does YouTube Know Me?**

—Developed a project in Jupyter that analyzes the data that YouTube collects from my account (requested using Google takeout) and then try to analyze what my YouTube watch history can tell about me and my personality.

## EDUCATION

### **NYU Tandon School of Engineering**

Sept. 2019 to May 2021

- M.S. in Computer Science      GPA: 3.6

## PUBLICATIONS

- **Using a novel metric to calculate similarity of images generated by Wasserstein MMD Autoencoder.** *AICAI '19, Dubai*
- **Text to Image synthesis using Generative Adversarial Networks with LSTM and GRU encoders.** *NCREEE '19, India*
- **Determining Image similarity with Quasi Euclidean Metric.** *Arxiv.org*

## VOLUNTEER WORK

Research Assistant, [CoronaNet Project](#), June 2020 – October 2020