



# UMANG SHAH

Software Engineer | NYC | [umangshah.me](http://umangshah.me)

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[/umangshah-js](https://github.com/umangshah-js)

## EDUCATION

### New York University

Sep 22 – May 24

Masters of Science in Computer Science, GPA: **3.94/4**

Coursework: Big Data, Cloud Computing, Application Security, Artificial Intelligence

### Vellore Institute of Technology Chennai

Jul 15 – May 19

Bachelor of Technology Computer Science and Engineering, GPA: **9.16/10**

## EXPERIENCE

### MIO Partners. (McKinsey & Company Subsidiary) | New York

#### Software Engineer Intern

Jun 23 – Aug 23

- Migrated **Active Batch** Jobs to **AWS Step Functions** allowing for better control and cost effectiveness.
- Migrated **Talend** Jobs to use S3 object storage for intermediate and final outputs.
- Leveraging **OpenSearch** and **Boto3** APIs to simplify debugging and triggering of Event Bridge Schedules.
- Developed a highly configurable **Python** framework to perform CRUD operations on RDBMS using excel.

### UnitedHealth Group (UHG) | Hyderabad, India

#### Senior Software Engineer (Full Stack)

Jul 19 – Jul 22

- Used **Spark**, **Hive**, **HBase**, & **Snowflake** to efficiently process clinical data of more than 26 million members.
- Developed real-time pipelines using **Kafka Cluster** reducing data SLA from **6 hours** to **10 mins**.
- Extended system to support custom file formats, improving provider onboarding time from **weeks** to **days**.
- Improved User experience by reducing page load time by **80%** using lazy loading & compression mechanism.
- Developed and deployed intuitive Angular UI with interactive charts (**D3.js**) for several Data Science Projects.
- Migrated services from Physical Machines to the **Kubernetes** platform decreasing application cost & downtime.
- Leveraged **Grafana** and **Prometheus** to implement alerting mechanisms for mission-critical processes.
- Migrated CRON jobs to **Airflow** providing better logging, alerting, and retry strategies.

## SKILLS

- **ETL/ Big Data:** Spark, HDFS, HBase, Hive, Snowflake, Talend
- **Web Development:** Angular, Angular Material, Node.js, Python Flask, Flask-Restful, Flex-Layout, Bootstrap
- **Databases:** MongoDB, SQL, PostgreSQL, Redis
- **Deployment:** Kubernetes, Docker, Aws, Azure, Nginx, Apache HTTPd
- **Programming Languages:** Python, Javascript, Java
- **Others:** Tableau, Pandas, charts.js, D3.js, NLTK, StanfordNLP, git

## PROJECTS

### nEWAT Essay Scoring System (Collab. with Prof. Yunier P. Sarduy, Shantou University)

Aug 20 – Feb 22

- Developed a Rule-based Evaluation Engine (**Python**) to grade a 5 Paragraph Issue Essay on multiple rubrics.
- Leveraged Constituency Parser from **StanfordNLP** to classify sentence structure (Simple, Compound, Complex).
- Developed a Web Application for the same in **Angular** to be used by graders and students.
- Deployed the project to the **AWS EC2** instance.

### Forest Fire Tracker (Forest-Fire Simulation, Real-Time Steaming, Analytics and Dashboard)

Feb 23 – Apr 23

- Designed to scale for high throughput, low latency situations.
- Simulated forest fire in **Unity** and leveraged **Kafka** to emulate real-time streaming of input images.
- Performed preprocessing in **OpenCV** orchestrating the data flow across stages using **Kafka**.
- Performed Prediction and Analytics using **Dask** with **Redis** for faster blob data access.
- Developed a dashboard to track the fire and system status using **Dash**.

## AWARDS

- Won the **1st Prize** in “Open Gov Data Hack” 2018 – a national-level competition organized by NIC, India.
- Won best project award in **TARP Expo'18** VIT Chennai.