

# Sharvil Katariya

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## EDUCATION

### STONY BROOK UNIVERSITY

#### MS IN COMPUTER SCIENCE

Grad. 2020 | Stony Brook, NY

Cum. GPA: 3.89/4.0

Teaching Assistant: Data Structures, NLP

### IIIT HYDERABAD

#### BTECH IN COMPUTER SCIENCE

Grad. 2017 | Hyderabad, India

Teaching Assistant: Software Engineering

## SKILLS

Tensorflow • Keras • PyTorch • XGBoost  
HTML5 • CSS3 • Javascript • PHP • AWS  
Spark • Kafka • Android • Django • Gulp  
MySQL • Numpy • Pandas • Scikit-learn  
AngularJS • NodeJS • Bower • Excel

## PUBLICATIONS

### INDICON CONFERENCE

Coimbatore, India | Dec 2018

A Privacy Preserving Approach to  
Generate Personalized Recommendation  
Based on Short Text Classification

### ICACCI CONFERENCE

Bengaluru, India | Sep 2018

Machine Learning for Secure Device  
Personalization Using Blockchain.

### ICOST CONFERENCE

Singapore | Jun 2018

A Personalized Health Recommendation  
System Based on Smartphone Calendar  
Events.

## COURSEWORK

### GRADUATE

Machine Learning  
Natural Language Processing  
Probability & Statistics  
Computer Vision  
Data Science Fundamentals  
Analysis of Algorithms

### UNDERGRADUATE

Complexity & Advanced Algorithm  
Data Structures  
Information Retrieval & Extraction  
Artificial Intelligence  
Internet of Things

## WORK EXPERIENCE & PROJECTS

### MICROSOFT | SOFTWARE DEVELOPMENT ENGINEER (MICROSOFT ADS)

March 2021 - Apr 2023 | Bellevue, WA

- Creation of interest-based user segments constituting to 40% User Growth using Azure Infra & newer ML models on scale for all International Markets.
- Active member of ideation meetings, contributing to 3+ ideas based on the team's work.

### MICROSOFT | DATA SCIENTIST INTERN

May 2020 - Aug 2020 | Bellevue, WA

- Evaluated various model architectures to improve the Ad Click predictions for Bing's Native Ads Team by incorporating event time into sequential models.
- Achieved an 8% AUC boost to 88% on Bing's Ads Re-ranking dataset.
- Secured 2nd place in Microsoft's C&AI Hack for Good Hackathon (Azure).

### SAMSUNG | SENIOR SOFTWARE ENGINEER (DATA INTELLIGENCE TEAM)

Jun 2017 - Jul 2019 | Bengaluru, India

- Developed scalable ML algorithms and production pipelines to predict smartphone user's demographics interests based on app usage, geolocation, browsing behavior and music/video usage with the help of Spark framework.
- Built a Generic Recommendation Platform, with a plug & play architecture for the addition of any new services to generate recommendations right off the bat.
- Devised short text classification models (including text-based CNN models, FastText, SVM), that is fast & lightweight for life event & context prediction.
- Improved the ML model accuracy by 7% & remodeled the data pipeline.
- Published 3 Research Papers and filed 2 Patents as well as mentored interns.

### RETAIL ANALYSIS - COSTELLO STORE | GUIDANCE OF PROF. SKIENNA

- Analyzed Costello Ace Hardware Store's data to provide prospective locations for their new shops using geospatial analysis & data science.
- Product Recommendations for users on the basis of their long and short-term preferences, as well as leveraging the product's popularity.
- Demand forecasting of products on performing time series analysis

### ACTION RECOGNITION IN VIDEOS | COMPUTER VISION, SBU

Trained different CNN, LSTM and hybrid networks on VGGNet features extracted from UCF101 dataset for action recognition in videos (PyTorch)

### TEMPORAL PREDICTION MODELS | LSI LAB, IIIT

Achieved 96%  $R^2$  score for time series prediction of environmental variable. Used techniques like RNN (LSTM, GRU), ARIMA, SARIMAX models for forecasting with the addition of seasonal and trend-based features.

### STOCK PRICE TREND PREDICTION | IIIT

Forecast stock returns on the basis of past returns & company sentiments from news, social media on the application of a variety of supervised ML techniques including many stock related features. (1.1K+ stars)

## ACHIEVEMENTS

Apr 2019	Patent	Machine Learning on Blockchain
Jul 2018	Spot Award	Best Employee Award (Data Intelligence team)
Apr 2018	Patent	Secure Device personalization using blockchain