

# RUCHIT MODI

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## EDUCATION

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**Stony Brook University**, Stony Brook, NY

**Dec 2020**

*Master of Science in Computer Science (Concentration in Data Science and Engineering)*

**GPA 3.96/4.00**

- Relevant Courses: Machine Learning, Natural Language Processing, Artificial Intelligence, Data Science Fundamentals

**Veer mata Jijabai Technological Institute (VJTI)**, Mumbai, India

**May 2016**

*Bachelor of Technology in Information Technology*

**GPA 9.61/10.00**

- Relevant Courses: Data Structures and Algorithms, Operating Systems, Data Mining, Network Security

## TECHNICAL

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- Languages: Java, Python, MySQL, MS SQL, Hive, HBase, C/C++, HTML, CSS, JavaScript, Typescript, PHP, JSP
- Tools: Git, Redis, ReactJS, Spring, RabbitMQ, Apache Flink, Apache Kafka, REST, DynamoDB

## EXPERIENCE

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**Amazon.com**, Seattle, WA

**Feb 2021 – Present**

*Software Development Engineer (Skills: Spring, Java, ReactJS, AWS Lambda, DynamoDB)*

- Working on a unified, surface agnostic Card-based books experience to provide a consistent UX to customers across all devices; developed and launched a standard design pattern Card that can be reused for multiple recommendations
- Developing a web application to onboard new Cards rapidly reducing the launch time from ~1 month to less than a week

*Software Development Engineer Intern (Skills: Spring, REST, ReactJS)*

**Jun 2020 – Aug 2020**

- Developed a web application in ReactJS for a self-service tool to onboard new strategies to Kindle Strategy Service (KSS), an Amazon recommendation tool; reduced the average onboarding time from 2 weeks to 2 days

**Media.Net Software Services Pvt. Ltd. (Directi)**, Mumbai, India

**Jul 2016 – Aug 2019**

*Software Development Engineer 2 (Skills: Git, Maven, Redis, Jupyter, RabbitMQ, Flink)*

- Designed and implemented an entire data flow architecture for automation of keyword launch pipeline for advertisement using RabbitMQ and Apache Flink; improved the efficiency of the pipeline by ~80%
- Devised an algorithm to show contextual ad keywords on a webpage using information from the content of its parent url webpage; contributed an additional ~50% revenue to the existing analyser
- Created a search engine api which returns Bing search results of a keyword from Microsoft Cognitive Services and computes its relevant phrases using TextRank: a modified PageRank algorithm
- Implemented Thompson sampling (Bandit algorithm) to explore similar intent keywords and exploit the best keyword earning higher revenue per impression

## PROJECTS

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**Email Classification Using Supervised Learning Algorithms** (Skills: NLTK, ML, NLP, Latex)

- Devised a text classification algorithm to help classify emails into custom user-defined labels; performed data preprocessing and feature selection, and implemented two supervised algorithms: k-NN and Naive Bayes Classifier
- Published a technical paper in “[Advances in Intelligent Systems and Computing](#)” series of Springer publications

**COVID-19 And Crime** (Skills: Python, Jupyter, Pandas, Numpy, Data Science, Statistics)

- Conducted extensive data analysis to assess the impact of COVID-19 on crime rates in San Francisco
- Performed time-series analysis using Exponentially Weighted Moving Average; conducted hypothesis tests such as Wald's test, Z test, KS test, Chi square test and Permutation test to validate inferences

**IEEE-CSI Fraud Detection** (Skills: Python, Jupyter, Numpy, Scikit-learn, Data Science)

- Performed analysis of fraudulent card transactions and examined correlations using data visualization tools
- Implemented feature engineering techniques and developed prediction models using Logistic Regression and XGBoost

## ADDITIONAL

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- Award Recipient, JRD Tata Scholarship (2015 and 2016) for excellent academic performance
- Runner up, Technohunt (2015), a treasure hunt inspired coding competition in Technovanza, VJTI
- Runner up, Android Application Coding Challenge (2014), Credit Suisse Group