

# Jay Harkhani

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## EDUCATION

University of Southern California (USC), Los Angeles, California

August 2021-May 2023

**Master of Science in Computer Science with GPA: 3.75/4**

*Relevant Coursework:* Analysis of Algorithms, Database Systems, Web Technologies, Game Development

University of Mumbai, Mumbai, India

July 2017-June 2021

**Bachelor of Engineering in Computer Engineering with GPA: 3.8/4**

*Relevant Coursework:* Data Structures, Distributed Systems, Machine Learning, Computer Networks, Operating Systems, Big Data, Systems Security, Data Mining

## TECHNICAL SKILLS

**Programming Languages:** Python, Java, JavaScript, C

**Web Technologies/Frameworks:** Node.js, Django, Spring Boot, Angular, React, Docker, Flask, jQuery, Express.js, Android, DropWizard, Nginx, REST

**Database Software:** AWS DynamoDB, MongoDB, MySQL, PostgreSQL

**Tools:** Datadog, Jenkins, JMeter, Postman, Tableau, Git, SonarQube, Unity, Android Studio, Jira

## EXPERIENCE

**Software Engineer Intern, Twilio, Los Angeles, California**

May 2022-August 2022

- Implemented Short Codes feature in Global Resource Routing(GRR) Service which will help company's customers and downstream services to configure/manage Short Code Resource directly from Twilio console.
- Increased code coverage by 12% by adding Unit & Integration Tests to identify bugs in the code before it is deployed.
- Updated JMeter script to enhance Load Test configurability by enabling/disabling tests on a per-endpoint basis.
- Modified Jenkins pipeline to run load tests with user-defined throughput values for each API and evaluate its metrics such as RPS, latency, cache hit, etc in Datadog dashboard.

**Data Analytics Intern, The Shaadi Times, New Delhi, India**

May 2020-June 2020

- Led in requirement gathering and collecting data about growth in Online Education Market due to covid-19 through web scraping and interacting with stakeholders in Education Industry.
- Implemented Python scripts for server setups, data storage, and executing queries on data.
- Created Tableau Dashboard and Reports to reduce time taken for making data-driven business decisions.

**Software Engineer Intern, Tata Consultancy Services(TCS), Mumbai, India**

December 2019-February 2020

- Processed data of more than 7000 customers of telecommunication company to remove redundancy and inconsistency.
- Led a team of 4 to construct a Machine Learning model with an accuracy of 90% to predict Customer Churn.
- Built a Customer Segmentation Tool for Marketing Team to boost customer retention rate and company profitability.
- Used Seaborn library to visualize customers' data based on demographics and other factors to support the Sales Team.

**Software Engineer Intern, Nautilus Hearing Solutions, Karnataka, India**

August 2019-September 2019

- Built a website using PHP and JavaScript to increase company's digital reach by making its hearing aid products accessible.
- Optimized Front-end code and SQL queries to reduce page load time to 8 seconds thereby enhancing website's performance.
- Created an Admin Panel to manage or post new content on the website and act on messages received from clients.

## PROJECTS

**Virtual Stock Trading**

February 2022-April 2022

- Built an Android application and a website leveraging Finnhub APIs to provide up-to-date information about share prices, analyst buy/sell recommendations and market news to users.
- Implemented daily and historical charts by utilizing JavaScript's HighCharts library that helps traders to make a profit by performing technical analysis.
- Improved app responsiveness by calling APIs asynchronously and reducing average response latency by 50 seconds.
- Added Portfolio section with an initial amount of \$25000 which can be used to buy and sell stocks and Watchlist feature to monitor favorite shares.

*Website Link:* <https://client-dot-assignment-8-346123.wl.r.appspot.com/>

**Shuriken Strike**

January 2022-April 2022

- Developed ninja-themed game with Unity where players use Shuriken as a weapon to destroy enemies & complete all 9 levels.
- Integrated Legacy Analytics Dashboard to enhance user gameplay by analyzing game metrics collected using custom events.
- Added freeze power-up that stops enemies for 10 seconds, along with hint and monetization feature to make the game more captivating.

*Game Link:* <https://sharktank.itch.io/shurican-strike>

**Smart Prosthetic**

October 2020-May 2021

- Developed Machine Learning model with an accuracy of 80% that predicts day-to-day hand movements of amputee by utilizing Electromyography(EMG) sensor signals generated during contraction of muscles.
- Applied Isomap Decomposition on 6000 features in dataset to reduce computation time and improve model accuracy.
- Executed Holt-Winter Exponential Smoothing to remove noisy data from 900 signals captured from participants' hands.