

Siddhant Johan Barua

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SKILLS

Strong: JavaScript, Node.js/Express, API's, React, Redux, C++, HTML/CSS, NoSQL, Twilio, Docker, Git, AWS S3, TypeScript, MySQL

Experienced: Python, Java, C, Redis, Bootstrap, NGINX, Sklearn, Erlang, GraphQL, neo4j, Flutter, Socket Programming, SSE, Jest

EXPERIENCE

HGS Digital

Chicago, USA

Sr. Software Engineer

September 2020 - Present

- Spearheaded a team of React/Node engineers in architecting a video-conferencing app by creating RESTful API's and design doc's detailing API call chronology & payload, leading to a 51.1% increase in 24 hour normalized case resolution throughput
- Delegated video-compression processes of a React/Node video-conferencing app to worker-thread pools in lieu of individual worker-threads, hence circumventing spawn overhead and lead to a scalable application without compromising efficiency
- Expedited the migration of a Node/Express & Server Sent Events based service from an absolute caching system using Arrays to an Opt-in Opt-out structure using a dictionary, hence elevating the service's data access efficacy from $O(n)$ to $O(1)$
- Engineered a TS/React/Redux and Node/Express application, by encapsulating the code-base into a Docker-Containerized unit deployed on an AWS EC2 instance, leveraging the HTTP caching and load balancing capabilities of NGINX
- Developed a TS/MySQL/Express/Node & React/Redux based Customer Relationship Management system, established a modularized abstraction of "actors" with differing permissions and querying capabilities, served as a RESTful API
- Retrofitted a Redux store with Thunk middleware to maintain continuous centralized client state and receive async updates
- Automated Node/Express based API's to handle asynchronous Webhook events, by promisifying looped asynchronous tasks
- Pioneered an extension to Twilio's [autoresponse](#) plugin to include a custom special character triggered text suggestion system
- Mentored new-hires on optimizing REST API's ensuring best practices be followed, oversaw planning/architecting/debugging

Tally Solutions

Bangalore, India

Jr. Software Engineer

August 2017 - May 2018

- Created test scripts to facilitate unit & load testing using JavaScript, with a focus on exhausting a wide range of edge-case. Build execution required aforementioned test scripts to be satiated, hence performing Validation Testing on every build
- Engineered the migration from an array data-structure to a thread safe hash map data-structure in Java, by taking advantage of the locking capabilities of semaphores hence achieving synchronicity. This increased lookup efficacy from $O(N)$ to $O(1)$
- Incorporated a Java priority queue into the Order Management Module by extrapolating data from a NoSQL database between differing schemas, prioritizing chronology of customer-delivery based on a score of order size, availability, frequency etc.
- Formulated robust documentation on installation, use cases, and available methods for the Sales Aggregator multi API suite

Zynga

Bangalore, India

Game Design Intern

December 2016 - June 2017

- Designed detailed art descriptions for over 800 assets for the game Farmville, by templating the WRITE operation to ZCMS
- Conceptualized the GET operation for Farm Crops, for over 10 front-loaded monthly Quests by linking "Crop" and "Farm" data
- Lead Designer of the Feature Adventurer's Inc, created design specs & XML format as well as performed prototype testing
- Proposed reduction of asset price by 20% for Adventurer's Inc. Resulting in more than 37% increase in in-game spending

PROJECTS

BudgetFlix

- Developed Front-End components using React & React video API for playing the videos, Back-End API implementation using Express.js and hosted on an ec2 instance. During it's live period saw close to 90 distinct users
- Established a like/dislike feature based on which the machine recommends movies (1,000,209 ratings Training Set)
- An Auto-Encoder Neural Network built on Keras and Flask framework, performs the operation of suggesting similar movies

Video Games Sales Prediction

- The data is cleaned and the relevant columns are Imputed (almost 600 missing ratings), by using SkLearn's Imputation feature
- Considers MSE(Mean Squared Error) and MAE(Mean Absolute Error) as the basis for regression model comparison
- Models established : Linear Regression, Random Forest, Boosting, SVM (Using SVR - Support Vector Regressor)

EDUCATION

Stevens Institute of Technology

Hoboken, NJ

Master of Science in Computer Science; GPA: 3.8/4.0

August 2018 - May 2020

P.E.S Institute of Technology

Bangalore, India

Bachelor of Engineering in Computer Science; GPA: 7.03/10

August 2012 - July 2016

INTERESTS

Playing guitar, Classic Rock | Martial Arts, Running, Hiking | Playing Videogames, Developing Videogames, Watching Twitch