Raj Chhatbar

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Education

Master of Science, Computer Science, *GPA: 3.7*   **Expected Graduation: May 2021**
California State University, Fullerton
Relevant Courses: Web Backend, Operating System, Artificial Intelligence, Software Verification, and Validation

Bachelor of Science, Physics and Computer Science, *GPA: 3.65,*   **Apr-2018**
St. Xavier's College, Ahmedabad and GLS University
Relevant Courses: OOP, Data Structures, Analysis of Algorithms, Database Management System, Compilers, statistics, Linear algebra

Technical Skills

Language: Python, Typescript, Go, Java, C++ *Cloud:* AWS (EC2, S3, Elasticsearch service, Sagemaker), GCP, Firebase, Kubernetes *Databases:* PostgreSQL, MySQL, MongoDB, Firebase (Cloud Firestore and Realtime), Redis, Dynamo-DB *Web Tech:* Django, React-JS, Redux, Express-JS, Next.js, Apollo Client, SASS, Material-UI *Big Data:* Apache Spark, PySpark *Libraries:* Scikit-learn, NumPy, PyTorch, TensorFlow *Architecture:* REST, GraphQL *Distributed system:* RabbitMQ, Kafka

Work Experience

CollabCafe, Inc.   **Full-stack software engineer Intern**   **February 2021 - Present**
- Working on to write 35 reusable components using Next.js, Typescript, and SASS
- Building a video chat application using Kubernetes cluster and opensource WebRTC Jits framework to serve 1000 users

California state university Fullerton   **Graduate Research Assistant**   **January 2020 - July 2020**
- Conducted research to understand impacts on cancer, based on gender, ethnicity and geographic region
- Analyzed the subset of data using statistical methods such as multi-comparisons, conducting meta-analysis with prior studies related to mortality and morbidity for a different type of cancer
- Identified importance of various features through domain expert and removed irrelevant features

Techmicra IT solutions   **Software Developer Intern**   **January 2018 - June 2018**
- Created a unit testing framework on all backend modules using Python which reduced 20% bugs in the overall system
- Designed and optimized SQL queries and stored procedures for faster execution; retrieval of data to the database
- Managed and co-founded the committee to organize various events among employees

Volunteer

Finary.io   **Software Developer Intern**   **May 2020 - July 2020**
- Collaborated with MIT and Harvard students to develop an MVP for a fintech startup, currently in the testing phase
- Designed and implemented a minimum viable product backed system within 3 weeks to get user feedbacks
- Developed REST API using express.js and deployed it over Firebase cloud function to reduce operation cost by 30%

Projects

Virtual memory manager in operating system   C++, Singleton design, OOP, Page replacement algorithm
- Implemented a virtual memory management system, included support for paging, Virtual Memory and page replacement to and from the backing store by utilizing LRU and FIFO page replacement algorithm

Text search using Docker and Elastic Search   NodeJS, Docker, Elastic search, ReactJS, Nginx
- Populated Elasticsearch with 100 books (230,000 paragraphs) to prepare a search API by leveraging Nginx and NodeJS backend client along with ReactJS as frontend client

Real-Time Taxi App with Django Channels and React   Django-Channels, Redis, PY-test, ReactJS, Nginx
- Used asynchronous Django-channels to create WebSocket hooked with React-JS to visualize the current location using Google Maps. Leveraged Cypress for creating end-to-end testing.

Blogs

- **How to Setup AWS S3 with Django REST like a Beast**, here I have written a tutorial blog where I have explained setting S3 Bucket along with creating REST APIs using Django for serving static files.
- **Create a Production Ready Infinite Scrolling in React-Js using Power of Debounce, Throttle, and Hooks from scratch**, here I have written a tutorial blog where I have implemented infinite scrolling by making and using a custom Hook.