

# Jayraj Arora

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## WORK EXPERIENCE

### Graduate Teaching Assistant, California State University - Fullerton

Aug 2023 - May 2024

- Delivered Web Backend presentations to 80+ students, focusing on hands-on REST API development in Python with MySQL and MongoDB. Emphasized key skills in API/database design and scalable strategies like caching, microservices, database replication, and load balancing, enhancing students' abilities to build robust, scalable systems.
- Guided students through practical Operating Systems concepts in Linux, utilizing hands-on examples and Linux commands.

### Product Development Intern, Modernizing Medicine

Jun 2023 - Aug 2023

- Boosted support team productivity by 20% by implementing RESTful APIs in microservices architecture for store creation.
- Facilitated the in-store payments of 200 stores by developing intuitive UI using reactive components.

### Senior Software Developer, Oracle

Jan 2020 - Aug 2022

- Engineered new features for the backend system of the Tax-Scheduler application, including logging, security, and web services.
- Reduced the page load time of the Tax Scheduler frontend by 35% by adding pagination, search, and filter functionalities.
- Migrated business rules for tax filing and forecasting services to improve performance by 15%.
- Maintained and optimized 40% code for the test scenario tracker and revamped database design.

### Software Programmer, Indiamart Intermesh

Jun 2019 - Oct 2019

- Orchestrated bulk import of micro-categories and specifications shown on the website, benefiting 150M Indiamart users.
- Achieved an 18% reduction response time by refactoring code and optimizing database queries for a category portal.

### Software Engineer, Mindfire Solutions

Nov 2017 - May 2019

- Developed fund transfer RESTful APIs with reversal and refund mechanisms for an app used by 10K merchants.
- Reduced monthly client losses of \$15,000 due to API timeouts, by logging errors and sending scheduled reports.
- Integrated unit testing to ensure 60% code coverage and revamped 70% of the code to improve code modularity.

### Software Development Intern, iB Hubs

Jun 2017 - Aug 2017

- Programmed schema definition in the internal Open API specification UI tool, improving team collaboration by 15%.
- Formulated and executed 175+ test cases to rigorously validate new changes in alignment with frontend requirements.

## EDUCATION AND TRAINING

California State University - Fullerton

**Master of Science, Computer Science**

Aug 2022 - May 2024

Fullerton, California, USA

Harcourt Butler Technological University

**Bachelor of Technology, Information Technology**

Aug 2013 - May 2017

Kanpur, India

### Publications

Shah, Nidhi, Kanika Sood, and Jayraj Arora. "Speech emotion recognition for psychotherapy: an analysis of traditional machine learning and deep learning techniques." 2023 IEEE 13th Annual Computing and Communication Workshop and Conference

### Relevant Coursework

Advanced Algorithms, Web backend engineering, Advanced Database Management Systems, Data Structures, Machine Learning

## PROJECTS

### ThoughtBridge: Empowering Connections for Mental Health

Jan 2024 - Present

- Integrated Angular reactive components for frontend development, Spring Boot for RESTful APIs and MongoDB as a database to develop a comprehensive platform connecting therapists and patients, crafting the application layout from scratch.
- Implemented JWT authentication, caching for fast data retrieval, and queuing mechanism for asynchronous messaging.

### Scalable backend architecture for Wordle game

Sept 2022 - Jan 2023

- Led the development of the REST API structure, game logic, database design, and three initialization scripts.
- Optimized the games microservice with load-balancing, nginx authorization, and three DB replicas, for faster reads.
- Engineered a dynamic leaderboard, utilizing a queue for score transmission and Redis for statistics storage from games.

## TECHNICAL SKILLS

- Programming Languages:** Java, Python, Javascript, Typescript, PHP, PL/SQL
- Frameworks:** Spring Boot, Angular, Django, Flask, FastAPI, Quart, Node.js, React
- Databases:** Redis, MongoDB, MySQL, Oracle, Postgres, SQLite
- Tools:** JIRA, Github, Docker, Kubernetes, AWS, Jenkins, CircleCI, SonarQube, Webhooks, Swagger, Apache Tomcat, Apache Spark, Hadoop, Nginx, Kafka, Jenkins, RabbitMQ, Postman, HTTPie, Firebase, Hibernate, NewRelic, Elasticsearch, Terraform, Minikube
- Other:** HTML, CSS, jQuery, AJAX, REST, GraphQL, SOAP, JSON, Microservices architecture, Unit Testing, Test Driven Development