

# Jayraj Arora

Fullerton, California | +1-(657)-535-9462 | [jayraj.arora@csu.fullerton.edu](mailto:jayraj.arora@csu.fullerton.edu) | [www.linkedin.com/in/jayrajarora](https://www.linkedin.com/in/jayrajarora)

## WORK EXPERIENCE

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

Aug 2023 - Present

- Instructing Operating Systems to 80+ students, emphasizing practical concepts in OS using C++ within Linux.
- Developing and delivering comprehensive learning materials, including slides and assignments, to ensure student success.

### Product Development Intern, Modernizing Medicine

Jun 2023 - Aug 2023

- Streamlined the process of creating 180-250 stores/month to perform business payments more quickly.
- Integrated terminal specific filters in the support tool to boost the productivity of 6 implementation specialists.

### Senior Software Developer, Oracle

Jan 2020 - Aug 2022

- Engineered new features for a backend system, including logging, security, and web services, for Tax-Scheduler application.
- Reduced page load time of Tax Scheduler frontend by 35% by adding pagination, search, and filter.
- Enhanced an immigration approval tool by introducing Machine Learning based prediction, accurate up to 78%.
- 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

### Projects

#### Scalable backend architecture for Wordle game

Sept 2022 - Dec 2022

- Led the development of the REST API structure, game logic, database design, and 3 initialization scripts.
- Optimized the games microservice with load-balancing, nginx authorization, and 3 DB replicas, for faster reads.
- Engineered a dynamic leaderboard, utilizing a queue for score transmission and Redis for statistics storage from games.

#### Speech Emotion Recognition: An analysis of Traditional ML and Deep Learning Techniques

Sept 2022 - Dec 2022

- Enhanced the accuracy of the Boosting ensemble technique to 86% by integrating diverse datasets.
- Evaluated and compared MLP, CNN, and LSTM classifiers with traditional ML models (KNN, SVM, and Random Forest).

### 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, Database Management Systems, Data Structures, Machine Learning

## TECHNICAL SKILLS

- **Programming Languages:** Java, Python, Javascript, PHP, PL/SQL, Typescript
- **Frameworks:** Spring Boot, Angular.js, Django, Node.js(Basics), React.js(Basics)
- **Databases and Cloud:** Oracle, MySQL, SQLite, Postgres, Redis, MongoDB, Amazon Web Services, Firebase
- **Other:** Git, HTML, jQuery, CSS, AJAX, REST, XML, JSON, Typescript, Microservices architecture, Unit Testing, TDD, Docker, Kubernetes, AWS S3, Cognito, LocalStack, Tomcat Apache, Nginx, Jenkins, Hibernate, Maven, Protocol Buffer, ngrok, JIRA, Bitbucket, Postman, IntelliJ, PyCharm, scikit-learn, Tensorflow, Keras, Pandas, Numpy, NLP, Deep Learning