

# Ayan Patel

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## Education

### University of Southern California, Los Angeles, CA

Jan 2022–Dec 2023

*Master of Science, Computer Science*

GPA 3.7/4

**Courses:** Analysis of Algorithms, Database Systems, Web Technologies, Natural Language Processing, Information Retrieval

### Gujarat Technological University, India

Aug 2015–May 2019

*Bachelor of Engineering, Computer Engineering*

GPA 9.2/10

**Courses:** Data Structures and Algorithms, Operating Systems, Artificial Intelligence, Networking, Object Oriented Programming

## Technical Skills

**Languages:** Python, Java, C++, HTML, CSS, SCSS JavaScript, TypeScript, SQL

**Databases:** MySQL, Oracle Database, PostgreSQL, MongoDB

**Libraries and Frameworks:** Angular, Angular Material UI, Express.js, React.js, Next.js, Bootstrap, Tailwind CSS, Flask, Axios, Socket.IO, RxJS, AJAX, NumPy, Pandas, NetworkX, Sklearn, NLTK, Matplotlib

**Tools and Technologies:** Node.js, Google Cloud Platform (GCP), REST APIs, JSON Web Tokens (JWT), Figma, GIT, JIRA, Docker, PostMan, AWS, Kubernetes, Android, Android Studio, Windows, Linux, MacOS

## Work Experience

### Software Engineering Intern, Infrd AI, United States

Jun 2023–Sept 2023

- Designed, developed, troubleshot responsive mortgage platform application for customers using React.js, Node.js, Express.js, MongoDB, Figma, HTML and SCSS and added features for management of loan applications and profile.
- Actively engaged in Agile development methodologies, code-reviews sprint planning, stand-ups, sprint retrospectives and collaborated with cross-functional teams, backend developers, and product manager for product and design requirements.
- Created reusable components, state, props, forms and events, React Hooks to use state and lifecycle methods and implemented lazy loading thus enhanced the scalability and maintainability by 50%.
- Built and Integrated REST APIs while handling asynchronous data and improved security by implementing JWT authentication.
- Used GitHub for version control, JIRA for Agile and Figma as an end-to-end, web-based design and prototyping tool.

### Project Engineer, Wipro Limited, India

Jul 2019–Nov 2021

- Developed single page application for budget estimate/expenditure of Gujarat state and for payroll of 185K+ Gujarat state govt. employees using Angular 10, Angular material UI, Typescript, HTML5, CSS3, Bootstrap 4 along with API integration.
- Involved in complete Software Development Life Cycle including Requirement Analysis, Design, Implementation, and Testing, maintained effective working relationships with team members and business analysts and followed AGILE methodology.
- Built custom abstract interfaces classes, components, directives and pipes to construct business logic.
- Extensively used RxJS operators, Reactive forms, lazy loading, service as dependency injection for handling data and improved the performance by 35%.
- Worked on manipulation of asynchronous data received from REST API calls using RxJS Observable/Promise.
- Solved build time errors, performed build deployment and code refactoring for older designs.

## Projects

### DigiSync - Personalized News & Bookmarking Tool | *React.js, Express.js/Node.js, MongoDB, JWT, socket.io, Docker, GCP*

- Built a MERN stack application using React.js, Express.js and MongoDB for letting registered users to get personalized latest digital synced news across the globe and bookmark them for their reference and improved responsiveness of the app by 40%.
- Implemented JSON Web Tokens (JWT) authentication and formulated real-time communication for the users using web-sockets.
- Performed deployment of the application on GCP as well as containerized the application and managed containers using Docker.

### Social Network (Instagram) Graph Link Prediction | *Python, Pandas, Networkx, Sklearn, NumPy*

- Predicted missing links/edges in graph based social network to recommend a user to other user.
- Aligned the problem to a supervised learning problem based on graph based features like Page Rank, Adamic/Adar Index, etc., on 1.83M user's data and used F1-score and binary confusion metric as performance metric.

### Business Reservation Android App | *Java, Android, JSON, Volley, Picasso, Axios, Javascript, Node.js, Express.js, GCP*

- Developed an Android app using Android Studio allowing the client to dynamically search and reserve from 1M available businesses fetched by REST APIs built on Express.js back-end and deployed the back-end on GCP.
- Designed several activities, fragments and recycler views to implement features such as swipe-to-delete, tab group, dynamic lists, etc.
- Implemented SharedPreferences as a local storage for storing the scheduled reservation details of a user based on time, email, etc.

### Video Rental Inventory System | *Java, Oracle Database 11G, Eclipse*

- Created a Java application for video rental store capable to manage video inventory and maintain customer profile in RDBMS schema
- Executed CRUD operations such as add/remove customer profile, sell/rent video, accept rating from customer etc.

## Leadership & Involvement

- Led a team of 8 coordinators for Computer Engineering Students Association in organizing and initiating Coding fest events for university students and it resulted in improvement of leadership and communication skills.

## Honors & Awards

- Awarded twice for Academic Excellence (cert. by NASSCOM) for being top ranked student in Computer Engineering stream in the university from Shri Dewang Mehta I.T foundation for academic year 2016-17 and 2017-18.