

# Pawan Bhandarkar

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## Education

### Carnegie Mellon University

Mountain View, CA

*Master of Science in Software Engineering; GPA: 4.0/4.0*

*Dec 2023*

**Courses :** Cloud Computing, Foundations of Software Engineering, Software Requirements & Interaction Design, Software Testing

### NMAM Institute of Technology

Nitte, India

*Bachelor of Computer Science; GPA: 9.8/10 (top 1%, Class of 2020)*

*Apr 2020*

**Courses :** Data Structures & Algorithms, Object Oriented Modelling & Design, Operating Systems, RDBMS

## Skills

**Languages :** JavaScript, TypeScript, Python, Java, C++, C#, Go, GraphQL

**Tools :** AWS, ActiveMQ, Azure, Docker, Kafka, Redis, Terraform, Kubernetes, Linux, gRPC, New Relic

**Frameworks :** React, Flask, PostgreSQL, Flutter, Redux, NodeJS, Express, MongoDB

**Soft Skills :** Communication (verbal and written), Leadership, Collaboration, Mentorship

## Experience

### TuneIn Radio

San Francisco, USA

#### Software Engineer Intern, Platform

*Jun 2023 - Aug 2023*

- Spearheaded the development of subscription-based APIs using WebSockets, enhancing real-time data delivery for up to 7.5M monthly users. Utilized Test-Driven Development in Go to ensure a robust GraphQL API gateway
- Engineered high-throughput data communication pipelines using Apache ActiveMQ and Redis Streams, processing over 2 million messages per day, with latencies under 30 ms, on AWS ElastiCache
- Achieved 95% code coverage with test suites and load-tested for 100,000 concurrent requests to ensure production readiness
- Automated microservice deployment using Terraform and Kubernetes. Maintained 99.9% uptime with New Relic monitoring
- Expanded the C# (.NET Core) monolith codebase with support for live streaming metadata for over 120,000 radio stations
- Collaborated with Product and Data Engineering teams to plan and prioritize related Jira tickets

### Team AIBOD Inc

Fukuoka City, Japan

#### Software Engineer 2

*Nov 2021 - Apr 2022*

- Created a React component library, reducing UI variants by 50% to enhance consistency in the POS for an unmanned store
- Led the development of a payment microservice, handling 200 transactions per hour, with gRPC, Flask and PostgreSQL
- Engineered an information management system for serving up to 150,000 users daily, with React, Python, SQL and GraphQL
- Deployed applications using Docker and AWS (ECR + ECS) and configured CloudWatch for monitoring

#### Software Engineer 1

*Feb 2020 - Oct 2021*

- Slashed total API calls by 80% by pioneering the use of Redux, contributing to a 20% improvement in app load times
- Integrated 30+ RESTful APIs leveraging Apiary and Postman, resulting in enhanced app functionality
- Set up a Jenkins CI/CD pipeline that automated 100+ weekly builds, while utilizing AWS services like ECR, ECS, S3, and AWS Fargate for seamless DevOps
- Developed a Unet-based AI image annotation tool, elevating data pre-processing rates from 20 to 200+ images/hour

## Projects

### Kanban Task Manager | React, EC2, ECR, Docker, NodeJS, MongoDB

*Jan 2023 - Present*

- Developed a responsive web app with pixel perfect user interfaces based on Figma designs. Used Client-Server architecture with dynamic theming and drag-and-drop UI, focusing on A11y, ARIA and Semantic HTML. Deployed to AWS EC2 using Docker and ECR with a CI/CD pipeline using Github Actions. Handled security with HTTPS/SSL on the AWS Load Balancer

### Incident Response | React, CloudFront, Docker, Socket.IO, MongoDB, Jenkins

*Feb 2023 - May 2023*

- Led the frontend development of a mobile-first communication platform for citizens and first responders during emergencies. Used Ant Design, Figma and Storybook for the UI, refactored the codebase and advised the team on best practices in UI development and accessibility. Deployed the app to S3 using Jenkins and CloudFront

### Emergency Social Network | HTML, CSS, TypeScript, NodeJS, MongoDB

*Aug 2022 - Dec 2022*

- Built an emergency communication system for real-time SOS messaging during earthquakes with an MVC architecture. Utilized SCRUM and Kanban agile practices, object-oriented analysis (OOA) and test-driven development (TDD) in a fast-paced environment to create a user-friendly system with JSON-based RESTful APIs

## Awards & Leadership

**Sakura Science Fellow :** Received a fully-funded scholarship from the Japan Science and Technology Agency to participate in a research internship at Ritsumeikan University, Japan

**Teaching Assistant :** Demonstrated strong leadership and team collaboration skills as a Graduate Teaching Assistant for three courses: Foundations of Software Engineering, Software Requirements & Interaction Design and Introduction to Graduate Studies