SANTOSH PANYALA

Lead UI Engineer

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PROFESSIONAL SUMMARY

Lead UI Engineer with 11 years of experience owning frontend architecture, design system governance, and component delivery for enterprise React applications in fintech and healthcare. At BNY Mellon, led the UI architecture for a token-based design system adopted by 3 product teams, built a multi-rail treasury payment monitoring dashboard across 11 payment rails, and shipped AI assistant interface patterns under the INSITE 2025 initiative.
At MUFG, owned the React/TypeScript component system across Zerobank and Bakuraku, two international banking products and led a phased JavaScript-to-TypeScript migration. Strong in component API design, design token systems, declarative UI patterns, accessibility standards, and cross-functional delivery with distributed engineering teams.

TECHNICAL SKILLS

Frontend Architecture: React 18, TypeScript, Next.js, Redux Toolkit, Redux Saga, Context API, JavaScript (ES6+)

Design Systems: Figma (Tokens, Variants, Auto-Layout), Storybook, Token Architecture, Component Libraries, Design-to-Code Workflows

UI Patterns: Server-Driven UI (SDUI), Declarative UI, Configuration-Driven Interfaces, Dynamic Rendering, Generative UI Concepts

Accessibility: WCAG 2.1 AA, ARIA Standards, Keyboard Navigation, Focus Management, Accessibility Audits

Styling: Tailwind CSS, CSS3, Sass, Less, Bootstrap, Responsive Design, CSS Sprite Optimization

APIs: REST APIs, GraphQL, Axios, TypeScript Service Layers, socket.io, API Contract Definition

Testing & Build: Jest, React Testing Library, Webpack, Babel, Vite, Jenkins, Docker, Git, Azure DevOps

Process: Agile, Scrum, Jira, Confluence experienced leading UI delivery across distributed consulting engagements

PROFESSIONAL EXPERIENCE

BNY Mellon (via Purexcel) | New York, NY — Jan 2025 – Present

Lead UI Engineer / Design Technologist

Client: BNY Mellon global custody bank; INSITE 2025 wealth management and treasury platform modernization
Role: Lead UI Engineer / Design Technologist
Environment: React 18, TypeScript, Tailwind CSS, Figma, Storybook, Python, REST APIs, Azure DevOps

- Led UI architecture for BNY Pershing Design System token based React 18 library covering 50+ components with TypeScript strict typing and Figma token mapping to Tailwind CSS variables. Three product teams (Eliza AI, NetX Investor, Wove) adopted it as their shared component source. The primary architecture decision was building the token layer as the contract between Figma and code, so updates to design tokens propagated through a documented sync process rather than per-component rework.
- Defined the design token taxonomy 100+ tokens covering color, spacing, typography, border radius, shadow, and interactive states maintained as the shared reference between Figma and the React codebase. When the token structure changed, both design and code updated from the same source.
- Architected Treasury Edge Payments Monitoring dashboard React SPA with live data across 11 payment rails. Key decision: build a unified status taxonomy mapping 11 rail-specific status conventions to a common operator-facing language, while preserving original rail terminology in the detailed view. Optimized for the cross-rail analyst who monitors multiple rails simultaneously, not the specialist who only works in one.
- Owned Eliza AI assistant frontend architecture scoped entry points (Account Status, Payment Inquiry, API Examples) were configuration-driven rather than hardcoded, a deliberate decision in a regulated environment where legal and compliance teams needed to control AI-facing copy without waiting for frontend deploys. Delivered conversation flows, uncertainty states, and feedback mechanism (thumbs up/down with optional free-text reason) on every response card.
- Applied declarative UI and SDUI patterns to Eliza's response card layer response types, related-topic suggestions, and escalation paths were driven by a typed response schema from the API rather than

conditional render logic in the component. Adding a new response type required a schema update, not a component change.
- Led React handoffs for Wove Trading fixed-income and UMA portfolio construction SPAs component API documentation in Storybook, TypeScript interface contracts with backend engineers, cross-browser compatibility reviews for IE and Chrome.
- Set up and maintained Storybook as the component review and documentation surface used during design-engineering alignment sessions and QA sign-off before each release cycle.
- Ran usability testing with 500+ wealth advisors across 20+ workflows measured task completion time before and after design changes through moderated sessions. Tested workflows showed 30% improvement in task completion time.
- Wrote Python automation scripts for treasury payment reporting replaced manual Excel-based data preparation with automated pipelines producing the same outputs from raw data sources.

MUFG (via Purexcel) | New York, NY Mar 2022 – Dec 2024

Lead UI Engineer

Client: MUFG global banking group; Zerobank digital banking (Japan) and Bakuraku AI expense management
Role: Lead UI Engineer
Environment: React 18, TypeScript, Redux Toolkit, Webpack, Babel, Jest, React Testing Library, Figma, REST APIs, Hotjar, Amplitude, Git

- Architected a shared React/TypeScript component system across Zerobank and Bakuraku two separate codebases with different release cadences. Designed TypeScript generic patterns and component API contracts that kept both products visually consistent without requiring a shared monorepo. Library covered 40+ components used across both products.
- Owned design system governance component naming conventions, variant structure, deprecation process, Figma library maintenance, and Storybook publishing pipeline. When components changed, both product teams received a documented migration guide rather than a breaking change with no path forward.
- Led phased JavaScript-to-TypeScript migration configured Webpack module resolution, tsconfig strict settings, and Babel transforms. Phased by module to avoid blocking parallel feature delivery. Introduced typed service contracts between frontend and backend, replacing undocumented API response shapes with explicit TypeScript interfaces agreed upfront.
- Rebuilt customer onboarding SPA after Hotjar recordings and Amplitude funnel data showed drop-off concentrated at the form submission step validation was submit-only. Redesigned to blur-triggered inline validation. Amplitude tracked 35% improvement in completion rate over two sprints following the change.
- Built configuration-driven UI for Bakuraku expense categorization category definitions, approval rules, and display logic came from API responses rather than frontend constants. Product and operations teams could update business rules without waiting for a frontend release.
- Defined TypeScript API contracts with backend engineers built typed service layers that frontend components consumed through custom hooks. Frontend and backend teams could work in parallel because contracts were explicit interfaces, not informal agreements discovered during integration.
- Maintained 80%+ unit and component test coverage across all shared packages using Jest and React Testing Library tests written as part of delivery and reviewed in PRs alongside implementation.
- Managed Agile delivery across distributed teams in New York and Asia two-week sprints, PR reviews, and daily standups. Ran code reviews for mid-level developers on the team.

Beckman Coulter | Miami, FL Apr 2020 – Mar 2022

UI Lead / Frontend Engineer

Client: Beckman Coulter medical diagnostics; Gravity AI Lab Platform and DxI 9000 analyzer interface (FDA-regulated)
Role: UI Lead / Frontend Engineer
Environment: React, TypeScript, Bootstrap, LESS, WCAG 2.1 AA, Jest, Jenkins, Docker, Git

- Led frontend development for Gravity AI Lab Platform owned component architecture, WCAG 2.1 AA compliance, and design system governance for an FDA-regulated clinical product. Compliance was a hard delivery requirement: all components shipped with documented ARIA roles, keyboard navigation, and contrast ratios before each release.

- Conducted accessibility audit across all clinical interfaces before FDA submission documented contrast ratios, ARIA landmark structure, keyboard tab order, and focus trap behavior in modals. Zero accessibility defect reports in post-launch regulatory review.
- Developed DxI 9000 analyzer interface through iterative Figma prototyping with clinical researchers simplified diagnostic result workflows, contributed to 20% adoption increase and shorter training sessions measured in post-launch clinician feedback.
- Built 40+ reusable React components with documented TypeScript props, accessibility annotations, and usage examples used by two development teams on separate Gravity AI product lines.
- Set up CI/CD pipeline with Jenkins, Docker, and Jest automated test runs on every pull request, containerized builds for consistent deployment environments across dev, staging, and production.
- Built cross-browser SPAs in React, TypeScript, and Bootstrap supporting IE, Firefox, and Chrome IE support was a hard requirement due to hospital IT infrastructure in the client base.

7-Eleven | Irving, TX Nov 2018 – Feb 2020

UI Lead / Product Designer

Client: 7-Eleven retail; Visops internal store operations platform and digital ordering experience
Role: UI Lead / Product Designer
Environment: React, JavaScript, Figma, Hotjar, Python, REST APIs, Agile/Scrum

- Led UI development and design for Visops 7-Eleven's internal web platform for vendor management, facilities tracking, and asset workflows across store locations.
- A/B tested checkout conversion funnel on mobile ordering platform identified specific drop-off steps through Hotjar session recordings, redesigned those screens, and delivered changes through two-week Agile sprints.
- Restructured Visops information architecture based on task analysis with store operations staff aligned redesign with the 2019 AI and sensor tracking product rollout.
- Built Figma prototypes and ran task-based usability testing with store operations staff before development translated findings into specific component and navigation changes.
- Used Python to analyze store operational datasets produced summary reports for the dashboard metrics team tracking store-level performance across large-scale deployments.
- Built React components consuming REST API feeds for real-time inventory and vendor status data coordinated with backend developers on API integration.

Hitachi Vantara | India Feb 2016 – Jan 2018

UI Developer

Client: Hitachi Vantara enterprise infrastructure; Unified Compute Platform (UCP) management console
Role: UI Developer
Environment: React, Redux, Redux Saga, socket.io, Bootstrap, SAP HANA, SSO, Git, Agile/Scrum

- Built React/Redux UCP management console consolidated NVMe storage, GPU compute, and network management into one interface with SSO and SAP HANA integration for Fortune 500 data center operators.
- Implemented socket.io for real-time NVMe and GPU monitoring live status panels with sub-second updates inside UCP consoles.
- Created shared React component library (redux-thunk, redux-saga middleware) adopted across multiple cloud portal teams documenting component usage and state patterns for developers on the platform.
- Built responsive component suited for hybrid cloud portals tab bars, map views, date pickers, push notifications, profile management using React Native and Bootstrap.
- Delivered interactive dashboards replacing legacy static HTML views in ReactJS, HTML5, CSS3, Bootstrap under Agile/Scrum.
- Built REST API service layers for UCP storage and computing metrics endpoints coordinated with backend Java teams on API integration and data shape contracts.

GGK Technologies | India Dec 2015 – Feb 2016

ReactJS Developer

Client: GGK Technologies software services; enterprise web applications
Role: ReactJS Developer
Environment: React, Flux, Redux, Redux Saga, Webpack, Babel, REST APIs, Git, TDD, Scrum

- Built responsive SPAs in React, Flux, Webpack, Babel REST API integration, form components, carousels, and responsive layouts under TDD/Scrum.

- Replaced custom state management with Redux and Redux Sagas resolved recurring state-related bugs and gave other developers a consistent pattern to work from.
- Collaborated with UX engineers to redesign a daily events website restructured navigation and content hierarchy to surface primary content above the fold.
- Worked with backend Java developers on JavaScript and CSS integration using Git for version control and code reviews.

EDUCATION

B.Sc. Animation & Design Osmania University (affiliated), India | 2015

CERTIFICATIONS COMPLETED

Professional Scrum Master I (PSM I) | Scrum.org | 2026

AWS Certified Cloud Practitioner | Amazon Web Services | 2026

IAAP CPACC | International Association of Accessibility Professionals | 2026