

ALEXANDER MELO

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SUMMARY

Software Engineer with 8 years of experience building design-system-driven user experiences in React, TypeScript, and Web Components. Spent 5+ years as a core contributor to IBM's Carbon Design System, leading enterprise-scale migrations and architecting component libraries.

PROFESSIONAL EXPERIENCE

Front-end Developer | IBM — Carbon Design System Team

Remote, United States • Jan 2023 – Present

Carbon for AI Chat

- Building React and Lit base UI components for LLM interfaces, enabling AI-powered experiences across IBM products.
- Architecting component APIs that support both human developers and AI agents building with Carbon.

Carbon Experience Platform (CXP)

- Led front-end architecture for migrating Carbon's documentation from Gatsby to Next.js with PayloadCMS and MongoDB, enabling 3x faster content publishing while reducing maintenance burden.
- Executed database schema design and data migrations to seamlessly transition legacy content to MongoDB while ensuring zero downtime and full integrity.
- Architected tenant-based RBAC system with Global Admin, Tenant Admin, and Tenant Editor roles for multi-team content management.
- Built custom Payload plugin for live preview synchronization, dramatically improving authoring experience during 100% content migration of Core and Products documentation.
- Designed and implemented new components including page header, table of contents, and block-level content gating for public/private documentation.
- Collaborated closely with designers, product managers, and content strategists to define platform requirements and user workflows.

Carbon for IBM Products

- Maintained and enhanced DataTable component with 40+ plugins, serving as critical infrastructure for enterprise applications.
- Implemented comprehensive testing strategy and added CodeCov coverage reporting to Carbon core and Carbon for IBM Products libraries.
- Contributed to component API design decisions, balancing flexibility with consistency across the design system.
- Wrote technical documentation and migration guides for component updates and breaking changes.
- Increased parity between React and Web component based UI.

Instana Migration

- Led Carbon adoption as front-end developer and design system SME for newly acquired Instana product.
- Created comprehensive parity documentation mapping Instana's existing design system to Carbon's components and patterns.
- Implemented foundational design tokens (colors, spacing, typography, grid) while maintaining Instana's visual brand expression.
- Built feature flag system enabling gradual opt-in to Carbon UI, allowing teams to migrate at their own pace.
- Delivered WCAG accessibility compliance improvements by replacing custom components with Carbon's accessible alternatives.
- Reduced design-to-development handoff time by 30% through standardized component usage.

SevOne Migration

- Migrated 30+ components from SevOne's "Flapjack" design system to Carbon, serving as Carbon SME for the SevOne engineering team.
- Saved SevOne team 1000+ developer hours through expert migration guidance, component mapping, and implementation support.
- Maintained Jira board tracking migration progress, ensuring parity with Carbon's design system and identifying gaps.
- Collaborated with SevOne's Senior Software Engineer to prioritize migration work and resolve technical blockers.
- Documented migration patterns and best practices for future acquisition integrations.

User Experience Engineer | IBM — Watson AI Ops Team

Remote, United States • Jan 2019 – Dec 2022

- Designed and developed interactive React prototypes translating UX designs into production-ready interfaces for Watson AI Ops platform.
- Built and maintained React component library for product team, establishing consistent UI patterns and reducing duplicate code.
- Created web animations and micro-interactions to reduce cognitive load and guide users through complex AI-driven workflows.
- Collaborated with UX designers to validate technical feasibility of designs and recommend implementation approaches.
- Implemented accessible HTML following WCAG standards, ensuring inclusive experiences for all users.
- Partnered with back-end engineers to integrate front-end components with APIs and data services.
- Conducted usability testing and incorporated feedback into component refinements.

LEADERSHIP & COMMUNITY

Front-End Developers @ IBM (FED@IBM) NYC Chapter Lead • 2023 – Present

- Grew NYC chapter membership by 50% through regular meetups, technical talks, and community engagement.
- Organized bi-monthly events featuring Carbon learnings, front-end best practices, and member spotlights.
- Partnered with IBM NYC recruiting to onboard new front-end engineers into the community.
- Established sustainable leadership model by identifying and mentoring co-organizers.

Bob-a-thon Lead Mentor • IBM AI Tooling • May 2024

- Mentored non-technical IBM employees on using Bob (IBM's AI development assistant) to build projects.
- Delivered technical talks on effective AI prompting strategies and AI tooling best practices.
- Created mentorship materials and documented learnings for future Bob-a-thon events.
- Led team shareout event showcasing Bob-a-thon projects and outcomes.

Technical Speaker

- Delivered multiple presentations on AI tooling, prompt efficacy, and front-end development practices.
- Shared Carbon Design System learnings and migration strategies with broader IBM engineering community.
- Contributed to FED@IBM knowledge base with NYC-specific resources and guides.

SKILLS

Languages & Frameworks: React, JavaScript, TypeScript, HTML5, CSS3, Next.js, Node.js, Lit, Web Components, MongoDB

Design Systems & Tools: Carbon Design System, PayloadCMS, Storybook, Figma, Design Tokens, Component APIs

Testing & Quality: Jest, Vitest, Playwright, CodeCov, ESLint, Accessibility Testing, WCAG Compliance

DevOps & Tooling: Git, GitHub Actions, CI/CD Pipelines

EDUCATION

Associate's Degree in Computer Science

Borough of Manhattan Community College • 2018