BARUN PRASAD

UI Architect & Strategist

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SUMMARY

UI Engineering Leader with over **17 years of experience** in **designing enterprise-level, accessible, and mobile-first web applications** and **cross-platform mobile apps**. Skilled in collaborating with product managers, designers, and engineering leaders, focusing on delivering **robust, modular, and scalable UI components** for high-impact projects.

- **Proven Architecture Expertise**: Extensive experience architecting complex and resilient front-end applications and design systems across modern frontend technology stacks.
- **Expert in React Ecosystem**: Proficient in **React.js**, **React Native**, **Redux**, **Next.js**, and **Electron**, with extensive experience in CSS-in-JS libraries such as **styled-components**, **Emotion**, and **Pigment CSS**
- **UI Specialist**: Expert in creating intuitive user interfaces with **HTML5, CSS3, SASS/LESS,** and **JavaScript/TypeScript** for both mobile and web platforms, integrating **Web Accessibility (WCAG 2.1/2.2 AA compliance)** best practices.
- **Comprehensive Experience in Design Systems**: Developed the **Arctic Design Kit** (https://www.arctic-kit.com) component library as an open-source, comprehensive React library with interactive examples, usage guidelines, and API references, streamlining enterprise UI development.
- **CSS Methodologies**: Proficient with modular CSS patterns, including **BEM, OOCSS, SMACSS**, and **Atomic Design** for scalable and maintainable CSS architectures.
- **Backend Integration**: Experienced with **NodeJS**, using **Express** and **Fastify** to build API endpoints and serve static assets, providing robust backend support for frontend applications.
- **Monorepo Setup**: Experienced in setting up and managing monorepo environments using tools like NX Workspace.
- **GraphQL Expertise**: Skilled in configuring and maintaining Apollo GraphQL server and client setups for streamlined and efficient data management between the frontend and backend
- **Containerization & Deployment**: Skilled in creating **Docker** containers of frontend applications to ensure consistent and scalable deployments. Experienced in creating CI/CD pipelines using **GitHub Actions** and other tools to automate testing, building, and deployment processes, accelerating release cycles and maintaining high code quality and reusability.
- **Cross-Platform Development**: Adept at developing applications that run seamlessly across web, mobile (**iOS and Android**), and **desktop** platforms.

- **Performance Optimization**: Proven record of accomplishment in improving application performance and reducing failure rates.
- **Collaboration & Leadership**: Demonstrated leadership in guiding teams, conducting code reviews, and collaborating effectively with UX designers, Product teams, and cross-functional groups across various locations to ensure successful project completion.
- **Agile Methodologies**: Experienced in Agile development and Test-Driven Development (TDD).

CORE COMPETENCIES

- **Frontend Technologies**: React.js, React Native, Redux, Next.js, Angular, HTML5, CSS3, JavaScript (ES6+), TypeScript
- **Design Systems**: Architecting and developing reusable components with extensive focus on accessibility and modularity (e.g., **Arctic Design System**)
- **Advanced CSS**: Modular CSS (BEM, SMACSS, OOCSS, Atomic Design), **SASS, LESS**
- **Cross-functional Collaboration**: Extensive experience in working with **product managers, UX designers,** and **UI engineers** to create globally impactful solutions
- **Web Accessibility**: WCAG 2.1/2.2 AA, ARIA standards
- **Build & Deployment Tools**: Git, GitHub, Docker, CI/CD, Netlify, Gulp, Rollup, Webpack and Vite
- **Testing & QA**: Jest, Vitest, Enzyme, Axe, Chromatic, Applitools and Codecov
- **Tools & Editors**: VSCode, Figma, Storybook, Sketch

EXPERIENCE

Senior Manager, UI Strategy

Moxe Health | Bengaluru, India | September 2023 – Present

Core Responsibilities: Leading the Frontend tech stack initiatives across India and the USA, with a focus on modernizing legacy systems and designing mobile-first web solutions.

Achievements: -

Design System Development: Led the creation of the **Particle Design System**, streamlining frontend development with reusable component libraries that reduced feature development time by **40%** and code complexity by **30%**. Collaborated closely with UX and product teams to establish architectural standards, ensuring consistency across projects. This approach boosted UI integration efficiency by **50%** and minimized design-to-development miscommunications, cutting rework by **25%** and accelerating project timelines

Projects: -

1. **Point of Care Insights**

   Overview: Streamlines collaboration between payers and providers by integrating clinical data directly into the provider's workflow within Electronic Health Records (EHR). Enhances efficiency, accuracy, and automation while safeguarding patient data. Allows providers to address care gaps, improve documentation, and reduce workflow completion time, leading to better-informed, higher-quality, and more affordable healthcare outcomes.

   Technologies: ReactJS, Vite, Rollup, NodeJS, Fastify, Spring Boot, Kubernetes, EHR Integration, SMART on FHIR.

   Contributions:
   - Re-engineered the legacy Point of Care Insights project utilizing Particle Design components, resulting in a cohesive and modern user experience
   - Improved automation capabilities, significantly reducing manual processes and increasing the reconciliation of care gaps at the point of care
   - Integrated SMART on FHIR for seamless EHR encounters and data loading

2. **Virtual EHR App**

   Overview: Developed an internal web app using Particle Design components to simulate an EHR system, supporting appointment scheduling and EHR encounter management with HAPI FHIR. The Virtual EHR App, essential for testing and demoing Point of Care Insights via SMART on FHIR, streamlines patient records, organizations, and provider management, replacing manual processes.

   Technologies: ReactJS, Vite, Rollup, NodeJS, Fastify, Spring Boot, HAPI FHIR Server, GraphQL.

   Contributions:
   - Architected and Developed the core functionalities of the Virtual EHR App to streamline testing and demoing of Point of Care Insights.
   - Leveraged Particle Design components to ensure consistency and efficiency.

Staff Engineer

Walmart Global Tech | Bengaluru, India | September 2021 – September 2023

Projects: -

1. **Checkout with Me**

   Overview: Checkout with Me (COWM) is a native Android app designed for Walmart associates to facilitate mobile checkout anywhere on the sales floor or at curbside. With this app, associates can efficiently assist customers by processing their purchases and providing immediate receipts (both paper and electronic). The app seamlessly connects to a debit reader and printer, allowing customers to complete payments and receive printed receipts on the spot.

   Technologies: ReactJS, Redux, React-Native, VS Code, Android Studio.

Achievements:

- Led a team to improve code quality, add new features, and optimize performance.
- Reduced transaction failure rates from over 30% to under 2%.
- Improved user experience through collaboration with UX designers.

2. **Device Management Framework**

    Overview: The Device Management Framework (DMF) standardizes and consolidates various methods for connecting to peripheral devices, providing a unified usage pattern. By abstracting device-specific implementations, DMF ensures reusability, encapsulation, and a modular design that is closed for modifications yet allows for client-specific extensions.

    Technologies: ReactJS, React Native, Redux, Electron, MQTT, Docusaurus, Rollup, NodeJS, VS Code.

    Achievements: -

    - Designed complete UI layers, creating a plug-and-play module system.
    - Led multiple teams to build modules for seamless device connectivity.
    - Guided the team in building a cross-platform device emulator for web, macOS, and Windows.

3. **Electronic Journal**

    Overview: Electronic Journal is a TLOG viewing application for Walmart Home Office and store associates. It enables users to query TLOG data by country, date, and store number. This project was initiated to modernize the tech stack and overhaul the legacy system.

    Technologies: ReactJS, Redux, NodeJS, Express.

    Achievements:

    - Led the UI team to design a new web-based solution with updated UX.
    - Established foundational architecture and project setup.

Principal Engineer

HealthEdge Technologies India Pvt. Ltd. | Bengaluru, India | June 2019 – August 2021

Projects: -

1. **Configuration Integrity and Promotion**

    Overview: The project aimed to develop a web-based solution for Business Analysts to modify the HealthRules Payor product configuration independently, reducing IT support. Additionally, key features were included in a mobile app for flexibility.

    Technologies: React.js, React Native, Redux.

    Achievements: -

- Created frontend architecture for both web and native platforms.
- Built reusable components and implemented unit testing.

2. **HealthRules Admin UI POC**

   Overview: This Proof-of-Concept aimed to transform the HealthRules Admin desktop application into a modern web-based solution, with select features also available in a native app.

   Technologies: ReactJS, React Native, LoopBack.

   Achievements:
   - Converted SOAP services to RESTful APIs.
   - Developed web-based solutions and native apps to enhance user accessibility.

Senior Engineer

HealthEdge | Burlington, MA, USA | October 2015 – May 2019

Projects: -

1. **Population Health Management**

   Overview: This initiative was to develop a web application and native app for member-centric data analytics, campaign management, user and role administration, notes management, and email template creation, laying the foundation for the organization's next-gen architecture.

   Tools/Technologies: ReactJS, Redux, React Native, Next.js, NodeJS, HTML5, CSS3, VS Code, Xcode, Android Studio.

   Achievements: -
   - Led frontend architecture and development.
   - Implemented complex components and ensured best practices.

2. **HealthRules Care Manager**

   Overview: This project focused on upgrading the legacy UI, originally built with Java and Silverlight, to a modern, web-based solution using ReactJS.

   Technologies: React.js, AngularJS.

   Achievements:
   - Developed new screens and features, enhancing performance and user experience.
   - Transitioned from AngularJS to React.js for better efficiency.

3. **Digital Member Portal**

   Overview: This initiative aimed to develop a mobile-first web portal and cross-platform mobile app, enabling HealthEdge technology for health plans to serve members. As an MVP, it will pave the way for future projects like the Provider Portal and IoT integrations.

   Tools/Technologies: ReactJS, Redux, React Native, HTML5, CSS3, .NET Web API, VS Code, Xcode, Android Studio, MS Visual Studio.

   Achievements: -

- Created RESTful APIs and developed frontend interfaces.
- Enhanced member engagement through improved accessibility

Senior Solution Engineer

Deloitte Consulting LLC | Camp Hill, PA, USA | December 2014 – October 2015

Projects: -

1. **Home and Community Services Information System (HCSIS)**
   Overview: The Pennsylvania Department of Human Services' seven program offices administer services to support the state's most vulnerable citizens. HCSIS facilitates the administration of multiple Home and Community-Based Services (HCBS) waiver programs across Pennsylvania.
   Tools/Technologies: Visual Studio 2012, VB.NET 4.5, ASP.NET, AngularJS, Oracle 11g, HTML5, CSS3, JQUERY, AJAX, JSON, JavaScript, XML, TFS.
   Achievements: -
   - Led release management tasks and scope planning.
   - Developed web applications enhancing user interaction

Onsite Coordinator/ Project Lead

L&T Infotech | Princeton, NJ, USA | February 2013 – December 2014

Client: MunichRe America

Projects: -

1. **Specialty Market Workflow**
   Overview: This web-based application enables underwriters, assistants, and managers to track work status, manage task allocation, and generate reports for new business and endorsements in the specialty market. It functions as a workflow tool to monitor the status of quotes and policies within this line of business

   Tools/Technologies: Visual Studio 2010, C#.NET 4.0, ASP.NET MVC 4.0, KnockoutJS, SQL Server 2005/2008, nUNIT, RhinoMock, StructureMap, PetaPoco, HTML5, CSS3, JQUERY, AJAX, JSON, JavaScript, SQL SERVER, XML, ReSharper, TFS, Should.dll and HP QC

   Achievements: -

   - Analyze requirements and provide estimates
   - Allocate tasks to offshore team members and lead daily status calls
   - Provide technical solutions to team members
   - Conduct code reviews and help the team in improving code quality

- Analyzed defects, assigned them to team members, and tracked their resolution status

Technical Lead

L&T Infotech | Hartford, CT, USA | September 2011– January 2013

Client: Travelers Insurance

Projects: -

1. **Quote Prefill**
   Overview: Quote Prefill is a web app that routes to a Strategic Auto or Homeowner's application based on parameters from Contact View and sets the appropriate web state.
   Technologies: ASP.NET MVC 3.0, nUnit, JavaScript, SQL Server.
   Achievements: -
   - Gathered requirements and designed prototypes.
   - Led design discussions and code reviews.
   - Assisted team members with technical challenges.

2. **eDelivery Preference Service**
   Overview: This web service, developed for a U.S.-based insurance company, manages customer policy preferences with features that include retrieving and updating preference details, such as eDelivery and paperless options. It integrates with ICE for automated email delivery and MIMQ for core metrics reporting.
   Technologies: ASP.NET Web Services, nUnit, Oracle.
   Achievements: -
   - Developed services to retrieve and update policy preferences.
   - Integrated with ICE and MIMQ services for email notifications and metrics.
   - Ensured maximum code coverage with unit tests.

3. **eConsent**
   Overview: This web application supports policyholders opting for paperless delivery. Features include user validation via token, zip code verification, and updating customers' eDelivery preferences.
   Technologies: ASP.NET MVC 2.0, nUnit, Oracle.
   Achievements:
   - Designed service layer architecture using TDD.
   - Wrote code to validate users and update preferences.

- Participated in design discussions and code reviews.
4. **Foundational Self Service**

   Overview: This web-based system, designed for existing policyholders, allows users to manage their profiles and request AutoID cards by mail. Key features include viewing and mailing AutoID cards, updating profile information, and changing email preferences for the policy.

   Technologies: ASP.NET, nUnit, Oracle.

   Achievements: -
   - Developed service layers supporting TDD.
   - Implemented features for profile updates and ID card management.
   - Ensured high code quality through unit testing.

Onsite Co-Ordinator

L&T Infotech | Hartford, CT, USA | September 2009– August 2011

Client: Insurity

Projects: -

1. **Policy Decisions/NGA**

   Overview: NGA (Next Generation Application) was a web-based insurance solution enabling clients to manage policy administration with features such as automated rating and issuance, full policy life-cycle support, ISO and custom rates maintenance, and email preference management.

   Tools/Technologies: Visual Studio 2008, C#.NET 3.5, ASP.NET, nUnit, MS SQL Server 2005, TFS.

   Achievements: -
   - Customized the product based on client needs.
   - Implemented regulatory changes per ISO rules.
   - Fixed production defects and worked on enhancements.
   - Coordinated offshore team activities and conducted code reviews.

Software Engineer

L&T Infotech | Mumbai, India | July 2007 – August 2009

Client: MunichRe America

Projects: -

1. **Autofac**

Overview: This product was a web-based solution for property and casualty reinsurance, migrated from ASP/VB to ASP/C#.NET 2.0 with an Oracle 10g database in an N-tier architecture. It streamlines transactions for American Re-Insurance clients, offering a secure, efficient tool for managing reinsurance business interactions.

Tools/Technologies: Visual Studio 2005, ASP.NET 2.0, C#.NET 2.0, Oracle, SQL Server 2005, VSS 6.0, MS Enterprise Library

Achievements: -

- Designed and developed modules: Organization, Agreement, Policy Information, and Property Location Upload
- Implemented Query Tool for System Admin and handled module enhancements and change requests

EDUCATION

Bachelor of Technology in Computer Science & Engineering

GPA: 8.54

Bengal College of Engineering & Technology, West Bengal, India

ONLINE PROFILES

- **GitHub**: github.com/barunprasad
- **Medium**: medium.com/@barunprasad
- **LinkedIn:** linkedin.com/in/barunprasad