

# Akash Ram

Software Engineer & Data Visualization Expert

Phone: +91-8961786126 Email: inbox2imakashram@gmail.com

Portfolio: insightcrust.com LinkedIn: linkedin.com/in/imakashram GitHub: github.com/imakashram

## Summary

**Software Engineer & Data Visualization Expert** with 10+ years of experience building **scalable, high-performance web applications** and **interactive data tools**. Delivered production solutions across fintech and enterprise—including StockEdge's cross-platform charting engine (**160K+ Play Store reviews, 5M+ downloads, 4.5/5 Play Store rating, 4.7/5 App Store rating**). Proficient in **JavaScript, TypeScript, D3.js, Angular, Svelte, and React**, with expertise in **SVG/Canvas rendering**. Active **open-source contributor** recognized for data visualization community contributions.

## Skills

<b>AI-Assisted Dev &amp; Tools:</b>	Prompt Engineering, Code Generation, Debugging & Analysis, Code Review, Architecture Design, Performance Optimization, Testing, Documentation, Workflow Automation, Claude, ChatGPT, Google Gemini, GitHub Copilot, Cursor
<b>Frontend Development &amp; UI:</b>	HTML5, CSS3, Sass/SCSS, Tailwind CSS, JavaScript (ES6+), TypeScript, Angular, Svelte, SvelteKit, React, Web Components, Redux Toolkit, Zustand, Modular Architecture, Component-Based Design, Design Systems, Responsive Design, Cross-Browser Support, Web Accessibility (a11y), SEO, Figma, UI/UX Design, UI Component Libraries
<b>Data Visualization &amp; Graphics:</b>	D3.js (Custom & Interactive), ECharts, Highcharts, Chart.js, Observable (Notebooks & Framework), Observable Plot, Konva.js, Motion, GSAP, Datawrapper, Flourish, RAWGraphs, Data Storytelling, Scrollytelling Websites, Interactive Dashboards
<b>Web Architecture &amp; APIs:</b>	Server-Side Rendering (SSR), Client-Side Rendering (CSR), Static Site Generation (SSG), REST APIs, Fetch API, Async Data Fetching, Data Transformation, Error Handling, WebSockets, Web Workers, Service Workers, Progressive Web Apps (PWA), Offline Support, Local Storage, Session Storage, IndexedDB, Ionic, Capacitor, Authentication & Authorization, Web Security (CORS, XSS)
<b>Testing &amp; Quality Assurance:</b>	Jest, Vitest, Playwright, Unit Testing, Integration Testing, End-to-End Testing, Debugging & Analysis
<b>DevOps &amp; Workflow:</b>	Git, GitHub, Branching Strategies, Pull Requests, Code Reviews, npm, Yarn, pnpm, Vite, esbuild, ESLint, Prettier, Webpack, CI/CD Pipelines, GitHub Actions, Netlify, Vercel, Cloudflare Pages, GitHub Pages, Agile Development, Workflow Automation
<b>Performance &amp; Security:</b>	Lighthouse Audits, Core Web Vitals, Bundle Optimization, Code Splitting, Lazy Loading, Tree Shaking, Performance Profiling, Encryption

## Work Experience

**StockEdge Fintech Pvt. Ltd. (StockEdge, Elearnmarkets)** Sep 2019 – Present  
**Associate Technical Lead** Kolkata, India

Tech Stack: Angular, Ionic, Capacitor, TypeScript, JavaScript, D3.js, SVG, Canvas, HTML, CSS, SCSS, Git/GitHub, Azure DevOps

- Architected **EdgeChart**, a **stock market charting engine**, enabling technical and fundamental analysis for **200K+ daily active users** across **Web, Android, and iOS platforms**; supported **4+ chart types** (Candlestick, OHLC, Area, Line) rendering **10K+ data points per chart** in **sub-100ms response time**.
- Engineered **50+ technical indicators (RSI, MACD, Moving Averages)** and **20+ fundamental metrics (P/E Ratio, EPS, Revenue Growth)** from scratch, reducing analysis setup time by **~50%**.
- Optimized the **chart rendering pipeline** to handle **50K+ stock price data points at 60fps** using **SVG/Canvas hybrid rendering, Web Workers**, and **data binning** for real-time performance.
- Developed **AI-driven financial analysis systems** including **Fundamental Score, Momentum Score**, and **automated Chart Pattern recognition** to accelerate stock screening and improve analysis accuracy.
- Built **multi-chart layouts** and **advanced drawing tools** enabling historical market analysis and technical pattern evaluation.
- Led engineering excellence through **code reviews, system design guidance, and mentorship**, improving **code quality, scalability, and team productivity**.
- Partnered cross-functionally with product, design, and backend teams to deliver **high-performance financial analytics experiences** optimized for **real-time data** and **user adoption**.

**CSoft Marketing Pvt. Ltd. (CSoft AS, CSPanorama API)** Mar 2015 – Sep 2019  
**Junior Software Developer** Kolkata, India

Tech Stack: HTML, CSS, JavaScript, D3.js, SVG, Canvas, PDF, CAD, Google Drive API, Dropbox API, Box API

- Architected **HTML5 document viewer** (CSPanorama API) supporting **10+ file formats** (PDF, CAD, JPEG, PNG, TIFF, BMP, GIF) across web and mobile; engineered for enterprise-scale document management.
- Integrated **cloud storage** (Google Drive, Dropbox, Box) enabling **seamless file import** and reducing access friction for distributed teams.
- Built **interactive annotation engine with D3.js** featuring **6+ annotation types** (line, freehand, arrows, polygon, rectangle, highlighter); enabled real-time collaborative markup.
- Optimized **viewer core** (zoom, rotation, fit modes, rectangle zoom, magnification) with **responsive performance** and cross-device consistency.
- Implemented **PDF bookmarks** and **CAD layer management** for advanced document navigation, supporting architecture and engineering workflows.

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## Personal Projects

### Back2Back Champions – Interactive Storytelling Website

Apr 2026

Tech Stack: HTML, CSS, JavaScript, D3.js, SVG, Canvas, Figma, Google Sheets, Git/GitHub, Claude AI, ChatGPT (Codex), Netlify

- Designed and developed an **interactive storytelling website** documenting **India's ICC Men's T20 World Cup 2026 victory**; combined narrative, **D3.js visualizations**, and **responsive design** (desktop, tablet, mobile) to create an immersive tournament experience.

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## Open Source Contributions

### VizChitra – GitHub Repo

Aug 2025 – Present

Tech Stack: Svelte, SvelteKit, JavaScript, TypeScript, D3.js, SVG, Canvas, HTML, CSS, Tailwind CSS, Git/GitHub, ChatGPT

- Developed and integrated a video recap feature using YouTube playlists (PR #124), improving user engagement and content discoverability.
- Optimized sticky header navigation behavior (PR #243), enhancing UI consistency and user experience.
- Standardized brand naming across documentation (PR #120), improving accuracy and reducing inconsistencies.

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## Developer Community Contributions

### Stack Overflow – Developer Profile

Nov 2023 – Present

- Earned **300+ reputation** and **2K+ reach** by answering **22 questions** on D3.js, data visualization, and JavaScript, resulting in **10 accepted answers**, **16 upvotes**, **1 Silver badge**, and **7 Bronze badges**.

### freeCodeCamp – Forum Profile

Oct 2023 – Nov 2023

- Contributed to the freeCodeCamp forum by answering questions on **data visualization, D3.js, and JavaScript**; guided developers in building **interactive charts and graphs**.

### Observable – Forum Profile

Nov 2023 – Nov 2024

- Active participant in Observable's **data visualization community**; contributed technical discussions on **D3.js, interactive charts and graphs**, and visualization best practices.

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## Education

### Bachelor of Technology (B.Tech) in Computer Science & Engineering (CSE)

2011 – 2015

Hooghly Engineering & Technology College, West Bengal, India

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## Honors & Awards

- Awarded **VizChitra Diversity Scholarship**; selected for **1 of 25 seats** at **VizChitra Conference 2025 (300+ attendees)**, representing **diverse voices** in **data visualization**. (Jun 2025)
- Commended by Vineet Patawari (Co-founder and CEO, StockEdge) for developing core features in StockEdge Pro, an **AI-powered Chart Pattern** detection system for stock analysis. (Dec 2023)