Soham Dasgupta

Technology Leader | Cloud Architect | Distributed Systems Expert | Principal Software Engineer
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Summary

Distinguished Principal Software Engineer and cloud architect with **15+ years** of experience architecting and delivering enterprise-scale distributed systems. Proven track record in designing **high-availability cloud architectures** serving **Fortune 500 clients**. Deep expertise in **AWS cloud architecture**, **microservices design**, and **enterprise financial systems**. Demonstrated success in leading strategic technical initiatives, driving cloud adoption, and establishing architectural governance frameworks. Known for mentoring teams, fostering innovation, and delivering mission-critical projects while maintaining stringent security and compliance standards.

Skills

- **AI/Emerging Technologies:** OpenAI API, OpenRouter, Vercel AI SDK, o3-mini, GPT-4o, GPT-4o-mini, Claude Sonnet-3.5, Model Context Protocol
- **Cloud & Infrastructure:** AWS CDK, CloudFormation, Lambda, Fargate, DynamoDB, SQS, EventBridge, SES, RDS, Cognito, CloudWatch, High-Availability Architecture
- **Architecture & Systems:** Microservices, Distributed Systems, Event-Driven Architecture, High-Scale Service Design, Multi-tenant Architecture
- **Security & Compliance:** OWASP Security Standards, Token-based Authentication, AWS Cognito, Multi-tenant Architecture, WAF Configuration
- **Financial Systems:** Lessee Accounting, Lessor Accounting, Emission Accounting, Multi-tenant Financial Platforms
- **Engineering Leadership:** Technical Mentorship, Architecture Governance, Engineering Excellence, Team Development
- **Backend & APIs:** C#, .NET, Node.js, REST, GraphQL, gRPC, OIDC, JWT, SAML
- **Frontend & UI:** TypeScript, React, Next.js, Astro
- **DevOps & Quality:** Docker, Kubernetes, CI/CD, Azure Pipelines, GitHub Actions, Automated Testing
- **Languages:** English, Hindi, Bengali - *All professional proficiency*

Experience

Principal Software Engineer | insightsoftware | *Kolkata, India (Remote)* | May 2023 - Present

- Architected and delivered a cloud-native asynchronous Lessor Accounting platform contributing to **$6 million ARR**, leveraging **AWS serverless architecture** with Lambda, DynamoDB, and EventBridge for enterprise-grade reliability
- Engineered a scalable multi-tenant emission accounting platform using **AWS Lambda**, **API Gateway**, **CloudFront**, and **DynamoDB**, designed to process millions of financial transactions for Fortune 500 clients
- Orchestrated end-to-end infrastructure deployment using **AWS CDK TypeScript**, managing Lambda functions, DynamoDB tables, EventBridge rules, API Gateway, and CloudFront distributions as code
- Served as product group security champion, implementing OWASP-compliant controls including WAF configurations, rate limiting, and comprehensive security measures across all enterprise features
- Designed and implemented a distributed task processing system using **AWS Fargate** and **DynamoDB**, enabling parallel processing of large-scale reports by automatically segmenting millions of lease records into optimized batches
- Optimized large-scale CSV processing implementing **Node.js streams** with **AWS Lambda**, significantly improving memory efficiency and processing capabilities
- Successfully migrated legacy authentication system to **AWS Cognito** with 2FA, enhancing security posture while maintaining seamless user experience
- Led system reliability initiatives through detailed **AWS CloudWatch** log analysis, providing critical support to QA and professional services teams by validating reported issues and ensuring correct system operation for enterprise clients
- Mentored engineering talent through architecture reviews and knowledge sharing sessions, contributing to improved team performance and professional growth
- Facilitated Scrum processes including daily standups, sprint planning, and retrospectives, while maintaining sprint board hygiene to ensure efficient workflow and delivery tracking

Software Engineering Manager | Deloitte | *Kolkata, India* | Apr 2017 - May 2023

- Directed the development roadmap for an enterprise lease accounting application serving **20+ Fortune 500 companies** and various US government agencies, achieving **20% annual revenue growth**
- Coauthored a microservice and micro-frontend ecosystem using **.NET**, **gRPC**, **React**, **Docker**, and **Kubernetes**, establishing a scalable architecture for enterprise clients
- Developed a distributed background worker using **C#**, **MSSQL**, and **Service Broker**, processing thousands of monthly reporting requests with high reliability
- Developed an enterprise reporting solution delivering **200+ FASB and IFRS compliant** reports, ensuring regulatory compliance for major corporations
- Enhanced software lifecycle processes with **CI/CD** pipelines, code reviews, and automated testing, significantly improving delivery reliability
- Created an internal parallelization tool that enabled QA to run accounting accuracy tests across 1000+ reports simultaneously, improving validation efficiency by **over 70%**
- Initiated Azure DevOps and Scrum adoption, streamlining workflow while achieving SOC1 compliance
- Enhanced hiring strategy in collaboration with Talent Acquisition, improving team cohesion and candidate quality
- Expanded the India engineering team, securing top talent and delivering high-quality releases
- Led an intern mentorship program, guiding innovation projects and training sessions
- Empowered junior professionals with career guidance, boosting productivity

Development Lead | EffiaSoft | *Hyderabad, India* | Mar 2014 - Mar 2017

- Developed a robust **REST API** backend for a POS application, supporting **3000+ MSME customers** with real-time transaction processing and inventory management
- Improved multi-tenant enterprise ERP application performance through database and API optimizations, achieving **25% performance boost** in core operations
- Implemented a reliable data synchronization system for Android/Windows POS apps with offline capability and automatic recovery
- Developed an Excel-based data import/export utility for efficient bulk data management
- Led requirements gathering with senior stakeholders and implemented key CRM features for a shipping enterprise, ensuring delivery aligned with business specifications

Junior Developer | La Exactlly Software | *Kolkata, India* | Nov 2009 - Mar 2014

- Contributed to the development of an enterprise payroll application supporting 5000+ employees, implementing core processing modules and calculations
- Improved payroll calculation engine performance, achieving **over 70%** reduction in computation time through code optimization
- Developed comprehensive salary slip and accounting reports with optimized database queries for better performance
- Implemented new accounting and inventory features for an ERP application, following specifications to enhance client workflows

Education

- **Master of Computer Applications** | Sikkim Manipal University | *Kolkata, India* | **2011 - 2013**
- **B.Sc. Information Technology** | Kuvempu University | *Kolkata, India* | **2006 - 2009**

Certifications

- **MCSA: Web Applications - Certified 2018** | Microsoft | **(Jul 2018)**
- **MCSD: App Builder - Certified 2018** | Microsoft | **(Jul 2018)**
- **Exam 480: Programming in HTML5 with JavaScript and CSS3** | Microsoft | **(Jun 2018)**
- **Exam 486: Developing ASP.NET MVC Web Applications** | Microsoft | **(Jul 2018)**
- **Exam 483: Programming in C#** | Microsoft | **(Jul 2018)**

Recognitions

- **Outstanding Performance Award**: For architecting a distributed background worker, enhancing user experience and application efficiency. **(Dec 2022)**
- **Outstanding Performance Award**: Recognized for timely pivotal release delivery. **(Dec 2021)**
- **Spot Award**: For mentorship leading to innovation project victory in 5G/6G technology. **(May 2019)**
- **Spot Award**: Contributions to USI engineering operations commencement. **(Apr 2017)**
- **Performer of the Month**: Key role in strategic CRM project delivery. **(Feb 2014)**