Soumyak Bhattacharyya

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Language, Framework, Platform & Technique

- Java, Spring, Hibernate, JPA, QueryDSL
- Oracle, MySQL, DynamoDB, ElasticSearch & SQL
- Git, Maven, Sonar, Jenkins, Docker, Terraform, CD Pipeline
- AWS Services (Lambda, ECS, Step Function, SNS, SQS, DynamoDB, APIG, Cognito, Textract, Comprehend, Lex)
- REST API, Web App, Chatbot & Serverless Solution Design, Engineering Best Practices, Patterns, Testing, and Security
- Foundational knowledge of Data Science (Python, Panda, Numpy, Matplotlib, ML Algorithm)
- Foundational knowledge of Data Engineering

Architectural Design Patterns

- Strong understanding of
    - GOF & SOLID design patterns
    - Cloud – Native design patterns
    - Event Driven patterns
    - Batch Data Processing patterns
    - Data Warehousing concepts
    - Semi – Structured, Unstructured and Opaque form of data

Work Experience

Practice Head   **Rubicon Red**   **Jul 2018 – Present**

- **FSSA** – Led a team of 3 engineers to deliver an Oracle Digital Assistant based chatbot solution for the University of Adelaide, which has digitized 4 specific services completely to support all future student inquiries. I built the entire Oracle cloud infrastructure using Terraform.
    - Technologies – Oracle Digital Assistant, Node.js, MySQL, Docker, Jenkins, Terraform, Oracle Cloud Infrastructure, Botium
    - Contributions
        - Developed solution architecture
        - Designed domain model & relationship
        - Designed data loading and unloading algorithm
        - Provisioned Infrastructure as code
        - Delivered engagement
- **Intelligent Automation (Document Processing)** – Led a team of 3 engineers & collaborated with Amazon senior consultants to deliver the Intelligent Document Management solution which is a first-of-its-kind application that simplifies processing documents through the application of AWS Textract and AWS Comprehend to perform OCR. The solution introspects and finds data from documents (PDF, images) and transforms that into machine consumable format. The solution is expected to reduce 50% of the manual effort that the customer spends now.
    - Technologies – AWS Lambda, Aurora, Step Function, SNS, SQS, DynamoDB, APIG, Cognito, Textract, Comprehend
    - Contributions
        - Developed solution architecture
        - Developed data extraction algorithm from PDF document
        - Developed cloud event model for the solution
        - Delivered engagement
- **Coex** – Led a team of 10 engineers to deliver 3 portals of Coex project that helped in recycling 4 billion containers, till date, in Queensland, AUS; wrote highly efficient invoicing engine to process 50k payment requests per day; the team under my leadership implemented well designed, documented and tested ~50 REST APIs, ~30 Angular based UIs and built an integration with Oracle Integration, Process, and Identity Cloud Services; used Jenkins to implement CD pipeline and Docker + Docker Swarm to scale the solution.
    - Technologies - Angular, Java, Spring, JPA, Oracle, Docker, Jenkins)
    - Contributions
        - Designed technical solution architecture, algorithm and data model for 'Payments Engine' module

- ▪ Designed authorization framework
- ▪ Delivered phase#2 of the engagement
- **QUT Q** – Led a team of 3 engineers to deliver an Amazon Lex-based chatbot solution for the Queensland University of Technology, which has resulted in a cost reduction of 80%; the solution reduced human effort required, roughly by 50%, to answer queries around admission procedure.
  - o Technologies - AWS Lex, Lambda, ECS, DynamoDB
  - o Contributions
    - ▪ Migrated old version of the bot into AWS Lex based solution architecture
    - ▪ Established the data model for the solution
    - ▪ Delivered engagement
- **AskQUT –** Leading a team of 4 engineers to implement an email classification solution for QUT using AI/ML services from AWS and the Serverless services from AWS to reduce the manual effort needed to classify emails by 80%
  - o Technologies – AWS Lambda, Step Function, DynamoDB, API Gateway, Comprehend)
  - o Contributions
    - ▪ Developed solution architecture
    - ▪ Trained the AWS Comprehend based model
    - ▪ Developed the data model for the solution
    - ▪ Delivered engagement

Engineering Leader   **Jun 2015 – Jun 2018**

- **MyST ARM** – As Engineering Leader, led a team of 8 engineers and designed Application Release Management feature sets of MyST. I wrote the Release Pipeline framework. I guided the team to deliver 200+ features in 3 years for a customer base consisting of banks, manufacturing companies, and government departments. During this period, I recruited a young batch of software engineers and grew them to be exceptional at delivering a quality outcome. During my stint the revenue earned by the product grew 2X times, the customer base grew by 40%, and defect reduced to 60%.
  - o Technologies – Java, Spring, Docker, Jenkins, Maven, AWS EC2
  - o Contributions
    - ▪ Developed Release Pipeline abstraction.
    - ▪ Designed and enhanced relevant data model.
    - ▪ Enabled team to deliver features per sprints.

Principle Consultant   **Jun 2014 – May 2015**

- **MyST Cloud Control** - As Principal Engineer, I wrote the infrastructure provisioner component of MyST using TOSCA. The outcome was highly appreciated in Oracle OpenWorld 2014 where the product was launched. My earlier experience at Cognizant while building Build - as a Service, came in handy while designing the solution.
  - o Technologies - Java, Spring, JCloud, Neo4j
  - o Contributions
    - ▪ Implemented REST API and data model
    - ▪ Implemented technical components

Technical Architect   **Cognizant**   **Oct 2011 – May 2014**

- **Build as a Service –** As Technology Architect for Global Technology Office of Cognizant led a team of 5 developers to design and build a Release Management Platform that was offered as a SaaS product. I extended the open-source Jenkins CI server to customize its plugin and core component's behavior. The solution helped at least 5 BFS account to be able to embrace CD for their projects without any significant upfront cost. (Java, Jenkins)

Senior Associate   **Jul 2010 – Sep 2011**

- Delivered an interface solution to bridge between .Net stack and AS400 iSeries backbone.

Information Technology Analyst   **Tata Consultancy Services**   **Sep 2004 – Jun 2010**

- **CTMIS** - Worked as module lead for Comprehensive Treasury Management Information System (CTMIS) - a flagship project developed by the Government solution vertical of TCS. The solution aimed at providing automation around state government treasuries of India. The solution comprised of two parts, a treasury management system and a state government employee pay bill generation system, with which I was deeply involved. The result was phenomenal, as the GDP of the State of Bihar was increased to 11% whereas the national average was 7%.
  - o Technologies – Java, Spring, Struts, EJB Session Beans, Hibernate
  - o Contributions
    - ▪ Designed pay bill generation module from scratch
    - ▪ Designed REST API & data model
    - ▪ Drove the team to deliver the solution

- ▪ Implemented the solution at customer site

* Apart from these documented projects, I have been involved in a consultative capacity with another 5 initiatives.

Education

University of Kalyani	**2000 – 2004**

- B.Tech in Electronics and Telecommunication Engineering (85%)
- Topped university in 3 semesters

St. Lawrence High School	**1998 – 2000**

- + 2 PCM (80%)

Pathabhavan High School	**1990 – 1998**

- Secondary (83%)

Functional Skill

- Strategy
  - o I have been part of the leadership group and co-authored strategies around growing business. Being one of the earliest employees at the India center I had the rare opportunity to participate and observe what it takes to build a delivery center from scratch.
- Business Development
  - o I have delivered RFPs, Proposals, and presentations to prospective customers about current services/products. I have been accountable for business development while supporting Presales & marketing activities.
- Delivery Execution
  - o I have been part of teams that delivered large enterprise web/chatbot applications while staying involved in all the phases of SDLC. I provided program/portfolio metrics to executive leadership and CEO to help us measure delivery efficiency, quality, and performance of the projects.
- Technology Leadership
  - o I grew up as an open-source developer and am still very strong on topics like object-oriented design, Java, design patterns, and algorithm. I design, develop, test, and deliver software solutions using the following - Spring; Hibernate + JPA 2; QueryDSL, Git, Jenkins, Sonar, Docker & IaC solutions, Oracle, MySQL, and Elasticsearch. I am an analytical thinker who consistently resolves ongoing issues or defects, often called upon to consult on problems that have eluded resolution by others. I am AWS Certified Cloud Practitioner.
- People Leadership
  - o I have built the practice from scratch - by recruiting freshers and experienced, upskilling them as necessary, and delivering several successful assignments. I am inspired by the ideologies of Simon Sinek.

Certification & Volunteer Work

- AWS Certified Cloud Practitioner
- **Co Community Lead** for Jenkins CI server Hyderabad chapter; I built up a local community of people who were passionate about DevOps, organized 10+ events.
- **Blogs** I wrote
  - o https://www.rubiconred.com/blog/event-storming
  - o https://www.rubiconred.com/blog/the-key-role-of-api-testing-explained
  - o https://soumyakbhattacharyya.github.io/