Amitava Shee

CTO - Data Science & Architecture, Fintech, Ann Arbor, Michigan, USA

Summary

Technology leader with a broad and deep skillset in agile architecture, development and operating internet scale distributed applications

Experience

Chief Technology Officer @ reThought Insurance *(May 2021 - Mar 2022)*

Build, operationalize and support reThought Flood Insurance Underwriting platform built on

- Rust, Typescript and Foundation DB that runs on self-hosted Kubernetes infrastructure
- Integrates with 3rd party API services such as HazardHub, InsCipher and insurdata among others
- Hosting and integration with Catastrophe Modeling Risk Analytics platforms - AIR Touchstone, KatRisk SpatialKat and KatRisk SoloKat
- Oversee integration with satellite data provider Hydronos Labs
- Enhanced risk scoring metrics with flood exposure data from National Flood Insurance Program (NFIP)
- Data Center infrastructure that integrates with multi cloud solutions in Azure, AWS and Wasabi
- Run engineering teams of Software Development (9), Data Science (3) and Devops (3)

Principal Engineer, AI & Machine Learning @ Ithaka *(Jan 2017 - May 2021)*

Drive product growth by implementing advanced search features within the Ithaka online platform that include its flagship product JSTOR among others

- Machine Learning applications to improve search results such as *Eigen Search* in collaboration with University of Washington, Seattle
- Developed an A/B testing framework by implementing a statistical hypothesis testing framework
- Implemented data mining and analytics on clickstream data using Data Bricks on AWS
- Implemented distributed search using Apache Solr 8.10 at an internet scale by leveraging Kubernetes (AWS EKS) and many other AWS Cloud services. Replaced previous version that ran on Data Stax and Apache Cassandra resulting in significant cost savings
- Developed a search API within a microservice architecture. Used Java 8 and Spring Boot React in a team of 6 engineers

Architect, Research Program @ University of Michigan Medical School *(Nov 2013 - Jan 2017)*

- Delivered MedBus – a SOA based Data Services platform that integrates large-scale health data using JBoss & java technologies
- Built a case for an API management solution. Helped bring IBM's API Management and Data Power products to the enterprise

- Co-lead the Data & Infrastructure Committee in a national healthcare research network called PCORNet. Delivered over 2M patients in a record 6 months
- Contributing to the president's $100M Data Science Initiative that brings together leaders in Data Science and Machine Learning
- Helped develop a DevOps group and contributed foundational Ansible code

Enterprise Architect, Medical School @ University of Michigan Health System *(Mar 2011 - Nov 2013)*

- Established an Enterprise Architecture program
- Oversee and engaged 5AM/Quintiles to develop a Research IT Strategy and an implementation Roadmap
- Evaluated cloud vendors and implement AWS

Information Architect, Enabling Technology @ University of Michigan Medical School *(2009 - 2011)*

- Led an applied research program (ENCORE) in medical education to support the Associate Dean's innovation program
- Developed rapid applications in CodeIgnitor/Ruby-on-Rails with turnaround times in weeks to support educational experiments
- Used Google analytics to present and visualize key insights

Manager, Enterprise Architecture @ University of Michigan Health System *(Jun 2007 - Jan 2009)*

- Led development of clinical application architecture standards
- Identified projects, created and presented proposals and acquired funding for capital projects
- Helped in the selection of Epic (EMR)
- Developed solutions in Enterprise Master Provider Index (EMPI) coded medication (RxNorm/IMO) and Lexicon (Apelon)

Banking & Financial Services @ Cognizant Technology Solutions *(2004 - 2007)*

- Integrated Pitney Bowes (mainframe) with a J2EE/WebLogic application for managing electronic bills online for GMAC.
- Developed BizTalk modules to integrate PeopleSoft General Ledger, Loan Origination Systems (QRM, Focus) and legacy sales system at Indymac bank.
- Developed an Enterprise Architecture based on Zachman Framework (ZF) for SallieMae.
- Re-implemented the DNN based portal in SharePoint with help from Microsoft consulting at SallieMae.
- Implemented a DotNetNuke (DNN) based portal for managing Borrowers, Students, Schools and Guarantors at SallieMae.

Software Architect @ CONTEXTWEB *(2002 - 2004)*

Developed an Asset Backed Securities (ABS) online platform for the securities group at Royal Bank of Canada in an early stage startup in New York City

Software Architect @ Techna International *(1999 - 2002)*

- Blue Martini (J2EE/Weblogic) consultant at Stanford School of Business. Implement single-sign-on (SSO) using Oblix
- Websphere consultant in an IBM team - helped Galileo transition from mainframe to the web

- Developed a J2EE/Weblogic based B2B SaaS platform for Gymboree franchises

Senior Software Engineer @ CA Technologies *(1999 - 1999)*

Developed a C++ based Microsoft COM/DCOM integration module in an object database product. Includes SNMP agents and MIB's for this module

Senior Software Engineer @ Tata Elxsi *(1995 - 1997)*

Provided Electronic Data Interchange (EDI) consulting services for GE Information Services (GEIS)

Management Trainee @ Fujitsu ICIM *(1994 - 1995)*

Developed system code in Unix and C/C++

Education

Bachelor of Engineering in Computer Science Birla Institute of Technology – BIT Mesra, Ranchi, India *(1990 - 1994)*

Certifications

MOR Leaders Program *(May 2016)*

Scrum Alliance, License: 000339704 *(May 2016)*