

Amitava Shee

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

[Email](#) / [Website](#) / [LinkedIn](#) / [GitHub](#) / [Twitter](#)

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](#)
- Pioneered a new risk metric *Resilience Score* that incorporates 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 @ [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)