# Vaibhay Sabnis

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# **SUMMARY**

- ♦ Highly collaborative and impact focused hands-on senior software professional having 2+ decades of software leadership experience setting up new teams, driving, designing, and building highly scalable, globally distributed systems & products for finance and ads domains.
- ♦ Passionate for first-in-class engineering principles, clean extensible interfaces, code simplicity, system maintainability and testability. Impact driven individual backed by consistently achieving metrics-based business outcomes. Agile mindset and a focus-to-finish attitude.
- ♦ Well-versed in building consensus across clients and internal departments, thinking big-picture and handling ambiguity. An intellectually curious, empathetic leader who believes in the immense potential of investing in people and teamwork.

#### COMPETENCIES

- Building highly scalable distributed systems and infrastructure for finance and Ads ML ecosystem
- ♦ Strong exposure to data management, entitlements, infra and risks/controls associated with sensitive information.
- ♦ Distributed System Design, APIs/Microservices
- Strong exposure to building and migrating scalable systems on internal and vendor cloud solutions (Azure, AWS)
- ♦ Distributed Caching, Messaging/Events Driven Design, Test Driven Development
- ♦ Build ML Validations & ML Observability infra tools
- ♦ Technologies used: Java, Sybase, Angular, Python, C++, Pytorch Agile, GIT, Jenkins, JIRA, Devops tooling

- ♦ Grow and setup new engineering teams and orgs (both 0→1 and 1→100+ setups).
- Organization strategy, Line & matrix management, engineering staffing (internal and vendor), Budgeting, Performance, and compensation management
- Machine Learning Product Infra for Model Evaluation and Interpretability in Ads Tech domain
- Hedge Fund Portfolio / Tax accounting and allocations, reconciliation, AML, Transaction monitoring, Risk calibration and PII/ MNPI data management, Client Onboarding and Business Workflow modelling

### PROFESSIONAL EXPERIENCE

**Title: Engineering Manager** 

Meta (f.k.a. Facebook) | New York

June 2021 - Present | NYC

June 2021 | New York

Role: Senior Engineering Manager, Global Head of Ads Model Evaluation, and Explainable Infrastructure

Org Size: 30+ across multiple locations in North America and Europe (including managers)

Primary Tech: C++, Python, Scribe, Pytorch, Presto, Hive/Spark, My-SQL

**Projects & Engagements:** 

- ♦ Setup new engineering org focused on building large scale infrastructure and product tooling for Ads Machine Learning Ranking models.
  - $\circ$  Setup and grew org consisting of 3 pods from 0  $\Rightarrow$  30+ including managers and senior individual contributors (senior staff+ levels).
  - Responsible for all aspects of org and team level vision, strategy, roadmap, culture, topline metrics and development practices and production rollout / maintenance.
  - o Responsible for org and individual engineer performance evaluations, management, compensation, and growth planning.
- ♦ Setup and scaled group that built products focused on ML Validation / ML Evaluation for serving live production traffic (>2.5bn users globally) across Meta's family of Apps (Facebook, Instagram, Messenger, WhatsApp et.al). These models are large scale, distributed and highly sophisticated probabilistic models (>millions of parameters, recurring/daily trained on petabytes of data) and are primary sources of revenue generation for Meta.
  - The model validation tools were built with high constraints on latency, reliability, performance, and scale.
  - o Tool, safeguards and risk controls established helped saved Meta USD **1.4+ Billion per year** in revenue losses.
- ♦ Setup and scaled infra team that built industry leading tooling focused on ML observability (diagnostic and detection). Tooling focused on topline metrics to reduce time-to-detect and time-to-mitigate issues occurring in the highly complex Meta's Ads Production Stack.
- ♦ Head-up cross business unit initiative to measure and improve engineering operations cost, leading to developer efficiency / delight.

Goldman Sachs | New York

Title: Executive Director

2020 - 2021 | New York

Oct 2020 - June 2021 | New York

Role: Senior Eng. Manager, Head of SecDB - Core Platform Engineering—Global Markets Division

<u>role:</u> Senior Eng. Manager, nead of Secob - Core Platform Engineering—Global Markets Division
Org Size: >40+ east coast US (including manager of managers)

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<u>Primary Tech:</u> Slang, SecDB, C++, Java, BigQuery, IDE builds (Secview, VSCode extension, IntelliJ), Gitlab, CVS, Kanban <u>Projects & Engagements:</u>

♦ Oversee, Support and Manage Tech leads and managers driving initiatives for extending adoption of the Slang programming language and overall SecDB (securities database) runtime ecosystem. Platform underpins the pricing, risk and analytics engines for financial instruments traded by Goldman Sachs. Responsible for technology guidance, career management, business stakeholder management, technology roadmaps. Key goals a) Foster collaborative and open SDLC b) Globally shared, consistent, and extremely performant analytics c) Uplift programming language design and implementation to take advantage of current technology trends (cloud native, observability).

Morgan Stanley Inc. | New York 2006 - 2020

Title: Executive Director Dec 2015 - Oct 2020 | New York

<u>Role:</u> Senior Global Chapter Lead for Investor Data & Security – Morgan Stanley Fund Services

<u>Org Size:</u> 100+ across multiple global locations (manager of managers, and software professionals)

<u>Primary Tech:</u> Core Java, Spring boot, REST/SOAP Webservices/APIs, SQL / No-SQL databases, Angular, C#, Websockets, Messaging Queues, Type-7/4 Load balancers, Adobe AEM/Acro forms APIs, open-NLP, OCR & 2D dynamic Barcode Imaging libraries, Junit, Cucumber, BOX APIs, GIT, Jenkins, Agile-Scrumban. Zookeeper, Treadmill, Cucumber, Junit, GIT, Scrum/Kanban.

Projects & Engagements:

- ◆ **Setup** vision, strategy, and roadmap for the org (including IT execution, progress metrics, development environments, tools and operating policies, technology upgrades, risk and control for client data management in-transit / at-rest, client and internal team interactions)
- ♦ Setup and lead 10+ member engineering team that built and deployed AML/KYC & Activity monitoring system. Responsible for overall technical design, AML / Legal business stakeholders' interaction, and own technology roadmap. Key goals a) Scrutinize incoming investment and identity documents b) Real-time rule-based transaction screening and suspicious activity reporting c) Meet regulatory compliance and calibrate investment risk to the franchise based on a point system across ~800K controllers/owners and ~5K legal entities and millions of legal documents. AML platform contributed to 7% increase in top-line revenue of MSFS business unit.
- ♦ Lead 10+ member team focused on improving effectiveness, horizontally scale and maintain Data Entitlements & Security application using single responsibility pattern-based APIs, distributed compute/cache, and content validation. Responsible for technical architectural choices, design and code reviews. Key goals a) Guard client trade-secrets/PII/MNPI data, stop misdirected communication/data-leaks b) Centrally house and maintain ~3.5 billion entitlement units spanning 90+ dependent applications and serve 250,000 requests/day. Improved API response time to 200 msec/request (improvement of 400%)
- ♦ Lead 20+ member globally distributed team focused on Modularizing, Enhancing, and Scaling FS-Investor Datawarehouse (FSID) by using data de-duplication/centralizing techniques, enforcing standards & APIs. Responsible for technical design/code-reviews, coach team members, collaborate with product owners/external teams/business stakeholders and own technical roadmap for the warehouse. Improvements have helped reduce business unit staffing needs by 10% YoY (~120 FTE). Key goals a) Maintain the sanctity of the authoritative reference data and transfer agency system b) house ~250 million+ physical documents and 6000+ curated attributes spanning ~850K investor relationships and 5K legal entities/companies across the globe. b) Externalize data access using APIs c) Modularize application to make it extensible.
- ♦ Lead 15+ member global team building a configurable business process modelling and advanced reporting framework to generate, orchestrate, assign inter-dependent business tasks across workflow processes. Responsible for overall technical design, establish sound engineering practices, conformance to industry standards, collaborate and extend the framework adoption to other departments within Morgan Stanley. Played an instrumental role in eliminating manual checklists plus regional hand-offs improving overall client delivery time by >40%. Scaled the application to handle ~4 million tasks/per month (with avg. execution time under 1 sec) using modern distributed computing solutions.
- ♦ Conceptualized, convinced senior business management and external clients, prototyped, and delivered a fault-tolerant document data-scrapping engine as a part of **Automation Focus Squad**. Implementation tremendously boosted client confidence around data capture and improved information extraction time by 75%.
- ♦ Member of the Company level NY campus recruitment and Technology Diversity committee focused on recruiting, growing, and mentoring diverse talent into the firm.

Vice President Jan 2013- Dec 2015 | New York

Role: Tech Lead (MSFS – Tax Analysis and Partner Accounting/Allocations)

<u>Primary Tech:</u> Core Java (JDK-6), Sybase, MQ, CPS, Adobe Flex. SOAP Webservices/APIs, Perforce, Jira, Scrum/Kanban.



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<u>Org Size:</u> >20+ across multiple global locations (including manager)

### **Projects & Engagements**

- ♦ Led an 8-member global team that helped built the Tax Portal application. Key goals a) Meet US hedge fund tax regulations for identifying wash sales triggering transactions and report on Qualified Dividends b) Perform tax income allocations and generate/distribute K-1 engine for hedge fund investors. Responsible for designing and developing the tax allocation engine Built a market differentiating engine that analyzes millions of tax lots daily against existing client trading activity and alerts traders to make tax-efficient trading decision helping generate profits for clients. The tax portal helped MSFS improve business topline revenue by 10%
- ♦ Led a 6-member in-house technology build effort to replace vendor application for calculating month-end NAVs for hedge funds. Doing approximately 2 mil Account Allocations, fee and investment RoR calculations per-period, this system buildout saved multi-million \$'s in yearly vendor license cost and gained competitive advantage for the business.

Vice President Jan 2011 - Jan 2013 | New York

Role: Tech Lead (Allocations & Statement Reporting)

<u>Primary Tech:</u> Core Java (JDK 6), Sybase, MQ, Adobe/Excel open source APIs

Projects & Engagements

♦ Lead developer on a 9-member team that help implement an Income/Expense allocation engine. Helped meet core accounting business obligations of generating and distributing statement of change reports for hedge fund clients. The system operated on ~100 million account allocations/per month across 600K Fund-Investors.

Senior Associate Jan 2006 -Jan 2011 | Mumbai

Role: Software programmer

<u>Primary Tech:</u> Core Java (JDK 6), SOAP, MQ, Informatica ETL, Sybase, file reading libraries, C#, pdfbox/aspose, SWIFT messaging. <u>Projects & Engagements</u>

- ♦ Led 6-member local development efforts to implement a configurable reconciliation system that performed position, transaction and cash-balance reconciliations for all Hedge Fund clients. **Developed** rule-based 'daily-breaks' auto-commenting module that helped reduce break resolution time by 90%.
- ♦ Implemented Income, revenue, and cash management system. **Responsible** for building rate-slabs based billing engine to calculate client bills, generate billing reports and track revenue, helping the COO office to **eliminate** manual tracking and **improved** bill collection rates by 30%.

Mastek Ltd. | London - UK, Mumbai - India

Jan 2003 - Jan 2006

#### **Senior Software Programmer**

Feb 2005 - Jan2006 | London

♦ Developed modules to replace legacy IBM mainframe with distributed design/codebase in healthcare claims processing space for UK client

# Software Programmer

Jan 2003 - Dec 2004 | Mumbai

- ♦ Selected to the prestigious Java center of Excellence based on performance amongst 140 new joined graduates within company.
- ◆ Contributed to Apache commons open-source ecosystem on-behalf of the company.

#### **EDUCATION/INTERNSHIP**

### Bachelors in Engineering | Electronics & Telecommunication

June 1998-June 2002

First Class with Distinction, Mumbai University, India

# Internship @ Indian Institute of Technology, IIT - Mumbai

June 2001-April 2002

Implemented SIP protocol handshake using VB.Net to make VoIP based phone calls.

#### INTERESTS:

Travelling, Photography, Capital Markets, Volunteering, Hindustani Music.

