DEBJYOTI SARKAR

B.Sc & M.Sc. (Integrated) in Mathematics and Computing
Indian Institute of Technology KHARAGPUR (INDIA)
Total Experience: 15+ years, Banking/Finance: 12+ years

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Skillset

- **Recent**: *Java *Algorithmic trading system development *Zero-GC Java application development *Low latency application development in Java *FIX application development with SBE *Jmx *JUnit *Mockito *Teamcity *JMX *JROCKIT *GIT *Jenkins *Shell
- **Past**:*Matching engine development *DSP Equity Swaps applications development, *Front office working with desk, *Equity derivatives low latency market making quoting system development, *HKEX facing project experience, *KDB/q application support *FIX *LMAX disruptor *MVEL *XML *HTML/CSS *JSP/Servlet, *AJAX *JQuery *Javascript *Project management and team leading.
- **Working knowledge:** *Scala *C# *KDB/q *Python *Perl *Shell *Aeron

Work Experiences

Algorithmic Trading Developer, HSBC (September 2021 - Present)

- **Talon**: HSBC's cash algo trading engine, written in Scala. It supports traditional plan based (vwap, twap, dynaclose) and positional algos (pov, iceberg). Core team member to maintain this product.
- **Hawk**: HSBC's strategic oms solution, replacement of a well known expensive vendor solution. Sequencer based application, ground up built for performance, robustness, keeping zero-garbage collection, single threaded, low latency aspect in mind. Core team member of Hawk Enabled Application development team.
- **Synthetic Fill Engine**: Early days of HSBC's strategic internalizer solution. This trimmed down component matches client's Sell orders with internal long position books.
- **Synthetic Fill Engine China Connect:** Core member of a 2 person only development team in APAC, launched product in China Connect markets, which strategically will expand to all markets in APAC and eventually will be adapted Globally.
- **Synthetic Fill Engine QFII:** QFII market launched in Synthetic Fill flow in 2024.
- **China Aggregated Self-Match Auction Controls**: Developing a pluggable validation component which would evaluate orders for potential self-match during auction trading phases.
- **Execution Services:** Latest initiative to collaborate with a reputed software vendor to build out new OMS. Joined the team as one of the 3 initial members of the newly formed team.
- Tech stack: Java, Cucumber, Aeron, Scala

senior java developer, Cryptocurrency Trading Exchange, Diginex (December' 2020 – September 2021)

- **Match engine development**: Contributed towards continuous development for new features and bug fixes. E.g. mass cancel request, cancel replace request.
- **FIX gateway development**: Client's FIX connectivity layer, uses FIX4.4, artio core library and FIX SBE. Worked on the same features as above mentioned for matching engine.
- **API server development**: Client's REST/WebSocket connectivity layer.
- Tech stack: Java, Kafka, FIX4.4, Artio library, FIX SBE, Aeron, Jenkins.

associate, dsp equity swaps, Morgan Stanley (December' 2018 – December' 2020)

- **Pharos:** Swaps lifecycle management system. It's combination of C# GUI and Java backend. We were a small team of developers in HK, India and NY who work closely with Derivatives and Prime business globally.
- **SGL:** Schedule Generation Library, a component within Pharos domain to generate swap payment schedules.
- **Poseidon:** Real time synthetic risk management and booking system. This product is widely used in the organization for risk management, trade, rate and fee booking by various teams. It's a combination of C# GUI, Java backend and KDB in-memory database.
- Tech Stack: Java 8, Spring, DB2, Sybase, C#, Kdb/q

authorized officer, it software engineer, market making quoting, trade capture, ubs (nov' 2015 – nov'2018)

- **SIMS (Future, ETF Market Making)**: Worked as feature developer for SIMS

- SIMS (Smart Inventory Management System) is UBS Global Equity Derivatives (GED) strategic solution which is a low latency automated quoting, hedging system and used by IndexArb futures and ETF market making traders.

- **Greybox (Warrants, Options)**: Contributed in the development of low latency quoting system for warrants.
- **Front office experience**: Worked in UBS BA free front office development team, engaged in daily interaction with Options and Futures traders. Implemented automated quoting system features and trading algorithms. E.g. implemented TWAP limit monitoring, max hedge ratio based hedgebook, universal imperfect basket strategy.
- **GRChat (Trade feed error alert framework):**Self-initiated and spearheaded trades capture error alert framework revamping. This mitigated operational risks and reduced legacy chat client migration workload by 50%. Implemented message throttling mechanism.
- **Falcon (Risk Data Processing)**: SME and lead developer for this global product.
- **GERONIMO (Risk Database):** It's a Sybase DB which is the heart of UBS Risk management. As a senior developer of UBS global Risk IT team, I provided L3 support for upstream and downstream services in GERONIMO domain.
- **Market connectivity developer**: Lead development for FIX based market connectivity modules.
    - Stepped up and spearhead OMD projects for UBS GED team during crisis. Coordinated with Hong Kong exchange to carry out readiness tests and production go-live for VCM.
    - Developed Korea market FIX connectivity, Shenzhen MMA market connectivity.
- Agile environment with regular standup, sprints, JIRA/Crucible/GIT code peer review, confluence documentation.
- Help team leads by carrying out regular software releases and production issue troubleshooting.
- Skills: **Java, IntelliJ, FIX (4.2), Agile development, TDD, Crucible, JIRA, Teamcity, Spring**

TECH LEAD, PRIVE FINANCIAL/TECHNOLOGIES (AUGUST' 2014 – OCTOBER' 2015)

- Stepped up and lead the team in product due diligence successfully in absence of top management.

SR. SOFTWARE ENGINEER, MONEX BOOM SECURITIES (H.K.) (MAR' 2014 – AUG' 2014)

AVP, JAVA DEVELOPER, INFOCAST (HKCLOUD), HONG KONG (DEC' 2012 – MAR'2014)

- Co - developed low latency cash OMS and played key role in RFP from HKEx to lead the company to the final stage, worked closely with software Architect.
    - Worked on development of a high performance Rule based Calculation Engine / Risk Management Engine using technologies like Lmax Disruptor and MVEL expression language.
    - Skills/Tools: **Java, LMAX multithreading, MVEL, XML, Oracle Coherence**.
- Created rich complex User Interface for trading first in thin client then in Google Chrome Packaged App. Used HTML5, Chrome API, AngularJS MVC framework and JQuery/Javascript API.
    - Skills/Tools: **Google Chrome API, AngularJS, JQuery, HTML5, CPA (Chrome Packaged App).**
- Developed and integrated "1-2-3 News Service" embedded in OMS.

SR. DEVELOPER, JOINTECH (EPAM), HONG KONG (SEPT' 2012 – NOV' 2012)

SR. JAVA DEVELOPER, RECRUIT.NET LTD., HONG KONG (FEB' 2011 – AUG' 2012)

SOFTWARE DEVELOPER, APPLIED RESEARCH WORKS INDIA PVT. LTD. (JUN'2009 – DEC'2010)

DEVELOPED KUEHS.COM [NON-PROFIT SELF-MOTIVATED VOLUNTARY WORK]

EDUCATION

Examination Passed	University/Board	Score/CGPA	Year
Integrated M.Sc. (B.Sc. and M.Sc.)	IIT Kharagpur	6.09/10	2009
10+2	WBCHSE	74.30 %	2002
10^{th}	WBBSE	81.87 %	2000

ACADEMIC M.SC. PROJECT ON COMPILER DESIGN AT IIT KHARAGPUR WITH "EX" AWARD