Mashud Rahman

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EMPLOYMENT **Bloomberg L.P.**, New York City, United States of America.   **July 2017 – present**

Team Leader, Application Frameworks
- Technical and management leadership
- Ownership of the runtime for Bloomberg Terminal applications
- Hiring decisions for senior engineers within the Application Frameworks group

Bloomberg L.P., New York City, United States of America.   **May 2012 – July 2017**

Senior Software Engineer, Application Frameworks
- Design and development of the next-generation runtime for Bloomberg Terminal applications
- Development of frameworks and toolkits for Bloomberg Terminal applications
- Maintenance of the Bloomberg Terminal client-side scripting environment

Bloomberg L.P., London, United Kingdom.   **February 2009 – May 2012**

Software Engineer, Financial Applications
- Design, development and complete ownership of financial applications: real-time alerting, and trade idea messaging
- Firm-wide consultation on design of financial applications
- Hiring and mentoring of junior developers

EDUCATION **University of Oxford, The Queen's College**.   **October 2004 – June 2008**

Master of Physics, 2:1 Honours
Classes: Quantum Field Theory, Particle Physics, General Relativity, Quantum Mechanics

SKILLS **Programming Languages:**
- C++ (8 years): C++14, object lifetime, subtype polymorphism, templates/parametric polymorphism, exceptions, lambdas, allocators, STL
- Javascript (8 years): ES2015 all major language features and standard library, in imperative and functional styles, some ES2016 and newer knowledge, embedding V8
- Python (9 years): many major language features, working knowledge of standard library

System design: high performance and fault tolerant distributed systems through profiling, multi-threading, multi-process solutions when appropriate; desktop application framework design

Unix: common system calls (file manipulation, process management, memory management, IPC), shells (bash, ksh), tools (vim, grep, sed).

Windows: win32 (hwnd, message pump, dlls), COM subset (ref counting, query interface), Visual Studio C++

Development practices: source control (git, svn), unit testing, component-driven development

Data storage: working knowledge of SQL database technologies, and basic knowledge of document-oriented storage systems

RESPONSIBILITIES **Team Lead**   **Jul 2017 – present**
Provide technical direction and management over a team of senior software engineers. Facilitate overall architecture design and prioritization of work.

Software Infrastructure Champion   **Oct 2011 – May 2012**
Acting as a bridge between infrastucture developers and application developers, providing feedback to infrastructure developers on new technologies, and helping application developers solve problems using available infrastructure

R+ on NodeJS, Desktop Application Platform, 2017
- Built a proof-of-concept porting the Bloomberg Terminal application runtime to the NodeJS platform
- Began production rollout of this NodeJS based platform
- Allowed a cross-platform desktop experience for the Bloomberg Terminal

R+, Desktop Application Platform, 2012 – 2014
- Built a prototype demonstrating feasibility of a server-less application environment
- Worked with a larger team to flesh out a full-featured version of this platform, shipping it to production

Trade Idea Messaging, "Notional Return", 2011
- Invented an industry-first method to fairly compare portfolio managers across different time periods operating in different industry sectors
- Created a high-performance C++ implementation of this calculation able to gracefully handle inconsistent input (as this was the case in practice)

Trade Idea Messaging, UI Redesign, 2010
- Implemented a flexible specification language (embedded in Javascript) to facilitate rapid development; this also eased development of unexpected new features
- Used the opportunity to suggest a new application concept that simplified multiple and confusing existing application concepts

Trade Idea Messaging, Database Migration, 2009
- Migrated an application from a deprecated database technology
- Required careful planning, and operational strategies to ensure minimal downtime
- Performance tweaks to account for different strengths and weaknesses of the two database systems

Index Member Change Alerts, 2009
- Implemented a new feature to alert users on weightings/member changes of Indices
- Designed and implemented the UI to support this feature
- Designed and implemented back-end code which required interfacing with legacy APIs

Price Alert Server, New Tick Identifier, 2009
- The identifier of price ticks were modified to contain additional metadata
- Required a change to the fundamental data-structure in the server
- Designed and implemented a data-caching technology to optimize start-up time of the server