

Anindya Biswas

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Career Summary

Results Focused professional offering an experience of over 9 years combined with International exposure in the IT & Telecom Sector. Possessing excellent analytical skills summed up with proficiency in Android, Java core, Spring Boot, Linux, Shell Scripting Programming languages, Testing Implementation techniques, Host level applications teamed with quality management control. Practical exposure to working in various phases of SDLC.

Innovative and exceptionally creative to foster ideas that impel the organization towards a result oriented direction. Impeccable Client Management and leadership skills with impressive professional speaking abilities. Driven by new challenges and adept at adapting to any cultural and business environments.

Career Objectives

Dedicated and disciplined Software professional, seeking the position of Senior Software Engineer or Technical Team Lead or Part of Software Design team, to contribute to the company's growth and in turn ensuring personal growth within the organization. I believe that my technical, functional and communication skills will enable me in facing the challenging career ahead

- AWS EC2, Lambda
- JAVA
- SDK
- Project Design
- Specification Creation
- Estimation
- Problem Solving

Employment History

Associate Team Lead
Mobilous Softech Private Limited.

Sep 11 – Till Date

Engineer
Classic Informatics

May 09 – July 11

Engineer
Geoinfosystems I.t.d.

Aug 09 – April 10

Engineer
CDOT Alcatel Lucent Research Centre

Jul 07 – Jul 09

Technical Expertise

Category	Software / Tool / Technology	Proficiency
Programming languages	Java(Code), Ruby(Debug), Python(Debug)	Excellent, Average, Average
Platform	Linux CLI	
Project Source Code Control and Bug Reporting Tools	Redmine, Mercurial, Git, CVS, Bugzilla, ClearCase, ARTS.	
Software Engineering tools	StarUML	

Education

Bachelor of Computer Science and Software Engineering Latrobe University, Bandoura Campus, Melbourne	2007
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Personal Details

Date of Birth	24 th May 1981
Marital Status	Married
Languages Known	English, Hindi, Bengali
Nationality	Indian

References

Will be furnished upon request.
Anubhav Jain
Khalid Mohammad
Akhil Tyagi

Projects Overviews

Projects worked on in Mobilous

Project Title / Name**Appexe Video Streaming Engine****Software / Tools / Technology Used**

UML (Design Tool), AWS S3, AWS Lambda Functions, Amazon Elastic Transcoder

Problem

JBAT one of our business partners wanted a YouTube-like Feature in Appexe

Project Description

The main challenge was either to use ffmpeg on an instance and then upload converted videos on S3 bucket or use an existing mechanism in AWS to do the conversion for us. So, we decided to go with elastic transcoder instead to do all our transcoding. To do this we would first upload a video from a Runtime (Android, iOS, Windows, Mobile Web) upload such images to s3. On S3 side we would trigger a Lambda function and that would then create a Job pass it to Elastic transcoder. The final converted videos would then be stored in separate buckets of 360p, 720p, 1080p. In case there is a notification of failure to transcode from Elastic Transcoder we would trigger another Lambda to update video database of failures.

Project Title / Name**Local DB Redirector for AppExe IoT Devices Specifications****Software / Tools / Technology Used**

UML/GATT Protocol, Java,

Problem

Connect IoT Devices with all Runtime (Android, iOS, Windows)

Project Description

Problem with IoT devices is two folds. Some have their GATT API Exposed and some have proprietary API to help integrate. Basically, both of these systems have either the core functionality exposed or Hidden in case of Proprietary Systems. So, we had to design a system that took care of both. In case of Open systems, the characteristics, and services needed to be defined in XML form. In case of proprietary services then the API needs to be Mapped to other Appexe backend Services. We were on the design team to create the core architecture to support that in every runtime.

Project Title / Name**Android Compiler Server****Software / Tools / Technology Used**

Spring boot, Apache Commons, Ubuntu, Android SDK, AWS EC2

Problem

Android no longer used ANT and used Gradle Build System

Project Description

First generation Android compiler servers were based on Apache ANT build system. However, Google removed support from eclipse and ANT build systems to Gradle and Android Studio. At some point, we were unable to use new Android features such as Firebase, push notification system. So, we rewrote the compiler server. It was written in Spring boot with Java 8 and Gradle build system. It also meant we had to migrate our Android development team from Eclipse to Android Studio and keep support for legacy code.

Project Title / Name**Windows UWP Compiler Server****Software / Tools / Technology Used**

Visual Studio (MS Build), Spring boot, Apache Commons, Windows Server 2016, AWS EC2

Project Description

This is the latest Runtime in the Appexe. Though the compiler server code is almost identical to Android Compiler Server (Above). There are several challenges to UWP compilation. Even on a Windows Extra-large Instance, an average build time for the runtime is around 6 mins for on platform (x32, x64, ARM). When Concurrency does appear, the server would crash. Either out of Memory consumption of MSBuild or CPU Consumption. Since there are no solutions to this from the server side. We had AWS Elastic Load balancer to spawn new instances whenever the load peaked and try and manage load that way.

Project Title / Name**Local DB Sync Algorithm for Differential sync****Software / Tools / Technology Used**

Core Java

Project Description

DB Sync is a feature that lets runtimes (Android, iOS, MW) to sync data with remote Database or services and store that information in SQLite. Wrote an algorithm to sort find changes in two sets of datasets and Insert, Update, Delete data accordingly on the server side. The algorithm was in core java and is used every time a runtime requests from a DB sync operation with the server.

Project Title / Name**Mobilous Plugin Architecture****Software / Tools / Technology Used**

Core Java, net.xeoh.plugins.base.Plugin

Project Description

Appexe as a system was self-contained, to begin with, meaning we had our own application database and data stores (Mongo) for things like images. However, there are clients that require integration of Appexe data with their backend services. To achieve that we had to take a step back and think what web services are. From our perspective all we do is with any SOAP or REST Services is we either Send data or consume Data. So, they are basically DB Operations like CRUD. Our Architecture lets all external calls into Database Operations.

Project Title / Name**Julius Text to Speech and Speech Recognition integration with Appexe****Software / Tools / Technology Used**

Julius Client Library in C and NDK for Android, FFmpeg and Plugin Architecture for Mobile Web

Project Description

We needed a speech recognition into Appexe Runtimes (Android, iOS, Windows). So, our CTO decided on Julius for speech recognition. Problem is audio for input for Julius is in PCM 8 Mono and Runtimes generally don't support that. So, we had to compile Julius Client into Runtime and its written in C. So, for Android, we had to use NDK to compile Julius into the runtime. Difficult Part was getting drivers for the microphone to work properly on Android. But we managed to make it work, however android Fragmentation means the same driver does not work on all devices.

Project Title / Name**Glassfish / Postgres Server Load and Production Instances****Software / Tools / Technology Used**

Netstat, proc

Problem

Sudden Spike in Server Load Lead to Unresponsive Applications

Project Description

This is for a Client project that we were running at that time. Turns out problems started occurring when the client decided to release the app to around 30K Users on the first release and we didn't have any information about it. So, a crisis room situation it became. So, we began monitoring 3 things

1. CPU Consumption
2. Memory Consumption
3. Netstat Ports to see the number of concurrent connections.

Problem was CPU and Memory was not choking. It was number of connections on the servers. Glassfish running on port 8080 only had a load of 2 requests. Where and Thin Server running on port 443 had a request of 40 connection count. So, the problem was runtimes were hitting thin server with load and thin would redirect to glassfish 2 requests at a time. Since it was an emergency we decided to get rid of thin server and reconfigure Glassfish to port 443. Then we saw the request count on Glassfish go up to 350 Connections. This was however not ideal, so we fine-tuned Glassfish to

take up to 1024 requests. That Failed too because at that time we saw a lot of DB Connection Failures. Turns out PostgreSQL server was being overloaded. So, we had to reconfigure PostgreSQL to accept more connections. It's not as easy as it seems, we needed to Tweak Linux Kernel Parameters. However, at the end we managed to do that as well. After that we managed to take load relatively ok. And We discovered a design flaw in the product, now we are in the process of implementing Rabbit MQ in our Plugin Architecture.

Project Title / Name **AWS EC2 Instance on Premise Deployment**
Software / Tools / Technology Used VMWARE, Ubuntu, rsync
Problem Client Requested to not use Cloud Services instead use VMs On-Premise Deployment.
Project Description
Client wanted to install EC2 Instances on VMware ESX Server for on-premises deployment. So, I had to clone EC2 Instances into VMWare OVF.

Project Title / Name **Security Attack on Mongo Clean-up and Restorations**
Software / Tools / Technology Used AWS, Kali Linux, Command-Line tools.
Problem Projects disappearing from MongoDB, AWS Singapore Region
Project Description
Client wanted to install EC2 Instances on VMware ESX Server for on-premises deployment. So, I had to clone EC2 Instances into VMWare OVF.

Projects worked on Previous Employers

Project Title / Name **Configuration Management for Operation Maintenance Center for WiMAX**
Software / Tools / Technology Used Star UML, Java Core, Jacob (CORBA IDL), Solaris, eclipse, multi-site ClearCase (Code Versioning) (Solaris Client for compilation), ARTS (Bug Reporting tool for Alcatel), Apache ant (to compile confIM), Apache XMLBean, Oracle, MIMIC (SNMP Simulator)
Organization CDOT Alcatel Research Centre
Project Description
This module is the core component for WiMAX radio parameter configuration. This is a server component that takes CORBA requests from clients e.g. Command Mode or GUI interfaces and configures the reference Database and aligns the database information with Network Element e.g. Base Stations, Wireless Access Servers, etc. I was dealing with exporting Database information to an XML file. The Purpose of the file was that it would be taken by external Third-Party tools not developed by Alcatel Lucent called N.P.O. (Network Performance Optimisers). The optimizers would then generate another XML file called Tuning Session files, which would need to be applied to the reference database. I was part of the end-to-end development team.

Project Title / Name **Command mode Interface for Operation Maintenance Console for WiMAX**
Software / Tools / Technology Used Star UML, Java Core, Jacob (CORBA IDL), Solaris (Bash shell), eclipse, multi-site ClearCase (Code Versioning) (Solaris Client for compilation and packaging), ARTS (Bug Reporting tool for Alcatel), ant
Organization CDOT Alcatel Research Centre
Project Description
This module was a command mode front end to all configuration servers such as Conf-IM (Configuration Management), TOPO-IM (Topology Management) and SUP-IM (Supervision Management). It would take user requests from UNIX command mode (bash shell) and invoke Java classes that would convert user requests to CORBA objects and then send it to its respective IM and get synchronous or asynchronous CORBA response and display the result on TTY terminal. This module is mainly for debugging and disaster situation tool in the situation that the GUI failed to work. My role involved being part of the conceptualization and design team, an end to end coding and development and unit testing.

Project Title / Name **The Service Program**
Software / Tools / Technology Used Android SDK
Organization Classic Informatics Private Limited.
Project Description
The project deals with Services provided by the client for to plan to allocate resources for tasks such as housekeeping and other services. Each agent is provided with an iPhone or an Android-powered device. And our job is to display the task lists and routing information for each agent on the field. Also, facilitate the user to bill their clients. The project deals with a web client as well that deals with rosters and task scheduling.

Project Title / Name **Rouge FM Android Client**
Software / Tools / Technology Used Android SDK
Organization Classic Informatics Private Limited.
Project Description
French Radio Station App. Also supported commentary and movie reviews. All the data fetched in XML and playing audio stream attached to it.