

London, UK

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EMPLOYMENT

AI Senior Software Engineer **Babylon Health** **Aug 2019 - Present**

- **Flow Engine:** building a stateless service that can power multiple products: Triage, Healthcheck, and Monitor with their user interactions. It traverses conversation graphs that aids symptom checkers and questionnaire services to perform localized chatbot conversations efficiently. (Scala)
- **Triage Model Pipeline:** generates model by extracting datapoints (symptoms, diseases, risk factors, priors, marginals) from various systems that can be used by runtime services. (Python)

Senior Software Engineer **Disney Streaming Services** **Aug 2017 – June 2019**
(acquired: Cake Solutions) **Nov 2016 – Aug 2017**

Media Analysis Services (MAS): analyses media files in the ingest pipeline before transcoding and packaging.

- Designed and implemented a micro-service based reactive architecture which does the following:
- Accepts Requests from multiple services to runs various commands on the video, audio, and subtitle files.
- Extracts attributes from the files and validates them for correctness.
- Notifies the callers when the results are processed and available for querying.
- Extraction Results are cached which improves the processing time of the entire pipeline.
- Stack: Scala, Akka, Kafka, Openshift, Kubernetes, DynamoDB, Protobuf, AWS, ECS, SQS, SNS, Jenkins.

Broadcast Control Plane (BCP): automates the media acquisition process of associating source and media exchange pipelines for the live media productions for ESPN+ and MLB.TV, powered by the BamTech platform.

- Electronic Program Guide writes live schedule data in broadcast files and uploads them to S3.
- BCP reads broadcast files from S3 and reacts to updates for their entire lifecycle.
- Partners send real time source information in SCTE 224, which BCP uses to make auto assignments.
- Assignments are available in real time to downstream services to splice and control the event streams.
- Stack: Scala, Akka, Kafka, Docker, DynamoDB, Protobuf, AWS, ECS, SQS, S3, Jenkins.

Senior Associate **Morgan Stanley** **Aug 2014 – July 2016**

Alerting Engine: processes alerts concurrently and sends notifications to Email, InApp, Push and SMS Channels

- Designed and implemented SMS Channel to deliver cash transactions and authorization messages.
- Saved firm's budget by evaluating modern SMS service providers namely Twilio, Nexmo and Plivo to replace old vendors used by the firm, which were expensive and not up to par with market leaders.
- On boarded Market on Demand Alerts which enabled user to receive real time alerts for value change of Stocks, Indices and Mutual Funds. News notifications for IPOs, Dividends and Bonds were also included.

- Reduced workaround time for resource bundle changes by moving them to persistent storage and implemented fallback mechanism for cache misses.
- Implemented a generic module to embed images inline and add attachments to Email when passed along with payload as Base64 encoded string.
- Stack: Scala, Akka, Protobuf, Mybatis, DB2, MQ, Teamcity.

Developer, Intern

Morgan Stanley

Jan 2014 – June 2014

Dashboard Framework – easing the process of creating dynamic dashboards for various internal applications

- Every business specific portal requires dashboards with widgets to showcase charts, grids and videos.
- Saved countless hours of future development effort by implementing this framework which allows creation of dynamic dashboards in weeks which took months previously.
- Stack: Java, ExtJs, Spring, Sybase, Perforce

Contract Developer

Google Summer of Code

Summer 2012 and 2013

OGDF.js for the Web – OGDF

- Ported Open Graph Drawing Framework C++ library which is full of templates to Javascript using Emscripten compiler, in order to use it virtually on any JS platform including your browser and node.js.

Custom Icons for Canvas Based Modeler - ASCEND

- Improved usability of energy modeling system by enabling creation of more customized intuitive icons for those people who don't like writing text-based models. Python and Gaphas were used for this task.

EDUCATION

Dhirubhai Ambani Institute of Information and Communication Technology (DA-IICT) **July 2010 – May 2014**

- Bachelor of Technology, Information and Communication Technology. CPI: 8.1/10
- Relevant Courses: Algorithms and Data Structures; Information Retrieval; Software Engineering; Operating Systems; Databases; Graph Theory.
- Research Project: Movie Classification using k-means and hierarchical clustering algorithms.

ONLINE COURSES

- Machine Learning by Stanford University on Coursera. (April 26, 2016)
- Principles of Reactive Programming (June 26, 2015)

PROJECTS AND OPEN SOURCE CONTRIBUTIONS

- Play-silhouette (2017) - Allow to pass user state with the social state handlers.
- Scala-Kafka-Client (2017) - Add optional call-backs in Auto Partition Mode.
- Liar's Poker Game (2015) - An online multiplayer card game, where bets are poker hands.
- MLpack (2014) - A small contribution for unification of constructors for all tree types
- Angry Birds Player (2013) - A computer program customized to compete in Angry Birds AI Competition.
- Gambit (2011) - A poker bot that analyzed strategy of other player bots and performs moves accordingly.
- Sudoku Solver and N Queens - Used backtracking to solve and implement these problems in my first year.