**Harsh Loomba**

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**Education**

**George Mason University, Fairfax, VA Aug 2014 – May 2016**

*Masters of Science in Computer Science* |**GPA – 3.5**

**Course Work**

Web Development | Algorithms | Data Mining | Machine Learning | Concurrent Programming | Software Security Artificial Intelligence

**Technical Skillsets**

JavaScript | Hibernate | HTML5 | Rest | Spark | Kafka | Java | PostgreSQL | Django | Python | Angular | Node.js | D3.JS | SPRING | C#

**Work Experience**

**ComScore, CA, San Francisco: Big Data Engineer Intern May 2015 - Aug 2015**

* Automated the manual extracts of monthly reports by using PostgreSQL | Python and reduced man-hours significantly by 90%.
* Built a tool to auto generate customized reports with the relevant web metrics to analyze the performance of clients’ websites. Used NodeJS to engineer data stream of web analytics metrics by reading machine logs and stored information like bounce rate, page view, click through rate, etc. in MongoDB and then stored on clusters to generate reports through PostgreSQL.
* Engineered web data by tagging page elements through comScore proxies and subsequently tracked users’ activities.

**Genpact Limited, India: Technical Consultant (Morgan Stanley) Jul 2011 - Jul 2014**

* Developed Data Warehouse on MySQL for collecting listed trades data executed on Morgan Stanley exchange house.
* Built several Java and Unix codes to pipeline the data from downstream to upstream applications.
* Used Cache and algorithmic skill-sets to reduce the generation time of financial reports by 200%.
* Designed the backend on Spring framework to reduce the reconfiguration time of changing data sources. Created Rest API calls to expose the application data to downstream applications.

**Infosys Technologies Limited , India: Systems Engineer Sep 2009 - Jul 2011**

* Built Java services to write healthcare contracts for Health Maintenance Organization product considering all the US health industry protocols.
* Managed two other health insurance legacy applications: Electronic Correspondence Handling Systems and Legacy systems, designed for specific group of people.

**Academic Projects/Research Experience (Available on Github)**

**Shopify API Generate Discount Coupon Mar 2016 - May 2016**

* Built a micro-service using Python to generate Shopify discount coupons. Request is sent in JSON format to shopify API. After authentication at server end, API sends back response in JSON format.
* Designed the front-end in HTML5 and REST services to expose coupon micro-service to the concerned business users.

**Bluebottle Café Inventory Analytics Mar 2016 - May 2016**

* Extracted hourly weather data from forecast API by using Python. Ingested weather data and static café data into an ETL tool called Birst. Utilized Birst features to create the data model, scripts and hierarchies to transform data into desired format.
* Used Amazon RedShift to query the ingested data and study the café demands against particular time of day. Subsequently used Birst visualization features and created graphs to visualize the data.

**JavaScript Enabled with multithreaded processing Aug 2015 - Dec 2015**

* Processed JSON requests concurrently by using WebWorker API. Designed various HTML5 pages to simultaneously serve different sized JSON requests.
* Handled JSON requests at server side by using Python 2.7 with flask API to expose Python methods as Restful API. Used D3.js to visualize comparison between serialized and parallel JSON processing.

**Secure Software Game Development Jan 2015 - May 2015**

* Designed a desktop game in Java using HTML5/JavScript. Took care of code vulnerabilities such as password hacking by using cryptography algorithm SHA1PRNG - pseudo random generator algorithm to create salted hash password.
* Developed SSL/TLS to communicate over secured/HTTPS network. Input validations such as buffer overflow, SQL injection, etc. was implemented to reduce input attacks**.**

**Student Admission System Jan 2015 - May 2015**

* Implemented a Student Survey System to thoroughly understand the Java EE and MVC framework such as JSF 2.0, Primefaces 5.1, EJB3, JPA 2.0, JPA QL, SOAP based webservices.
* Used JBoss 7.1.1 as the Application server, MySQL for databases and Amazon Web Services(AWS) instance and RDS instance to host the application.

[**Segmentation of Gallstones in Ultrasound Images**](http://www.computer.org/csdl/proceedings/iccsit/2009/4519/00/05234996-abs.html) **(Published paper in IEEE) Aug 2008 - May 2009**

* ***Agnihotri, S.; Loomba, H.; Gupta, A.; Khandelwal, V., "Automated segmentation of gallstones in ultrasound images,"Computer Science and Information Technology, 2009. ICCSIT 2009. 2nd IEEE International Conference on , vol., no., pp.56,59, 8-11 Aug***.
* Used image processing techniques: Anisotropic diffusion, Unsharp filtering, NCUT segmentation, Floodfill algorithm and automatic scribbling - processed ultrasound images to automatically detect Gallstones.