Karthik Balasubramanian

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Education

Masters in Information Systems Management, Heinz College, Carnegie Mellon University   **May 2017**

Relevant coursework: Data Structures and Algorithms, Distributed Systems, Machine Learning (ML), Practical Data Science, Research in Data Science, Mobile App Development, Database Management.

Bachelors in Information Technology, SRM University, Chennai   **Apr 2013**

Professional Experience

SingTel DataSpark Analytics, Singapore   **Data Engineering Intern**   **Summer 2016**

[Spring, React.Js, JQuery, Apache Spark]

- Created an interactive Apache Spark Job Configurator Web Application from scratch using React.Js and Spring Data framework in an agile environment to auto-write ETL spark job configuration files.
- Reduced job failures by 40%. Exported the tool as a product of DataSpark to its clients with documentation and tutorials.

Tata Consultancy Services, Chennai, India   **Software Engineer**   **Jun 2013 – May 2015**

[Apache Camel, Spring, Hibernate]

- Oversaw project estimation, use-case design, software development, performance testing and rollout activities of a critical data integration project for a US based retailer.
- Optimized data transformations to facilitate large scale data transfer from client systems to enterprise cloud. Data movement efficiency was 99% which reduced data reconciliation process for the client.
- Actively involved in developing and documenting proof-of-concepts with data transformation and processing frameworks like Apache Camel which was later utilized across the client projects as boilerplates.
- Received Technical excellence award for successfully completing three of the eight major releases in the project.

Academic Projects

Demand Forecasting Singapore Taxi coverage based on Public Traffic Movements   **Jan 2016-Present**

[Python, JavaScript, NoSQL, Machine Learning]

- Modeling a Machine Learning Algorithm to maximize the supply patterns of taxicabs in Singapore to fill the gaps of city's deterministic public transport network.

Department of Justice's Crime Reduction Network- New Orleans Police Dept.(NOPD)   **Jan 2016-Present**

[Python, Tableau, Excel, Machine Learning]

- Working with Director of Analytics at NOPD to develop a data-driven model that improves department's response times for emergency calls and increase the level of community-oriented policing.

Airbnb price prediction tool   **Sep 2016- Dec 2016**

[Python, Machine Learning, NoSQL]

- Created a pure python tool which predicts the price of an Airbnb listing based on its features and locational significance.
- Performed hyper-parameter tuning with selected models and achieved accuracy score of 70% with limited dataset for the City of Pittsburgh.

Hilti Quiz-Train   **Aug 2015- Dec 2015**

[Android, Spring, MySQL]

- Created Hilti Quiz-Train, a native Android application for Hilti mobile challenge 2016, to ease the knowledge-transfer process among the tertiary sales employees of Hilti corporation.
- Completed second in the competition which saw a participation of over 120 teams around the world.

Skills

Scripting and querying Languages: Java, Python, C++, SQL, NoSQL, JavaScript, HTML.

Tools: Jupyter notebook, Eclipse, NetBeans, Android Studio, Amazon EC2, IBM Web sphere, Excel, Tableau.

Frameworks: Apache Hadoop, Spring, React.Js, Android, Apache Camel, Apache Spark, Hibernate, SOAP, REST.

Publication and Extracurricular Activities

- Automated Sentiment Analysis on Online News Feeds, Publisher- IRNET GRET International Journal ISSN 2320 –6632, Vol-1, Iss-2, 2013.
- **MOOC:** Deep Learning by FastAI (2017 Jan-Present), Intro to Apache Spark by Edx (2016 July), Stanford CS231N (2017 Jan-Present)