

AMAL KRISHNA R

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EDUCATION

M.S. in Computer Science: Expected Dec 2018
Concentration: Data Analytics
CGPA: 3.50/4.0
Boston University

B.Tech in Avionics Engineering: 2012 - 2016
Indian Institute of Space Science and Technology (IIST)

RELEVANT EXPERIENCE

Quality Assurance Intern, Boston University Sep 2017 - Dec 2018

- Intern on Quality Assurance process for HR & Payroll functions & Programming team at BU IT & Services.
- Performed SAP HCM Automation & HPE LoadRunner for performance testing.
- Developed unit, integration test cases & development bug reporting for SAPUI5 web-app testing.

Data Science Intern, MetLife Summer 2018

- Led reformatting of Net Promoter Score analytics to create an ongoing data set merging 1000+ files, leveraging Alteryx.
- Devised ordinal logistic, multi-nominal models to provide descriptive & relative significance of factors that impact NPS.
- Developed random forest models for NPS predictive analytics.
- Executed key-phrase extraction & sentiment analysis using Azure text analytics to identify key claims factors.

Software Engineering Intern, Ather Energy Mar - July 2017

- Implemented automation functionalities for program management team using JIRA API and python.
- Designed a data visualization portal for 300+ employees with SailsJS from the JIRA issue tracking data.
- Collaborated with data intelligence team and manipulated data leveraging REST API, Elasticsearch, Kibana & Grafana.

Data Analytics Intern, Tech Mahindra Aug - Dec 2016

- Built and evaluated data analytics projects with python for UpX Academy, e-learning venture under TechMahindra.
- Published white papers & e-books on data science research.

Summer Intern, Indian Institute of Space Science and Technology Summer 2015
Mentored by B.S. Manoj, Professor & Head, Dept. of Avionics, IIST
Project : Software Defined Delay Tolerant Network

- Analyzed challenges of SDN in a high delay environment.
- Implemented a python-C based SD-DTN module that was deployed onto every switch leveraging OpenFlow protocol.
- Module act's as a light-weight controller generating flows for switches & computing plausible locations to store packets in an isolated network.

TECHNICAL SKILLS

Strongest Areas - Data Science & Visualization, Software Engineering

Languages - Python, R & JavaScript

Tools/Frameworks -

Recent-experience - React, D3.js, TensorFlow, PyTorch, Keras, Alteryx, Tableau, Shiny, Django, NodeJS, Apache Spark, SAP HCM, Selenium, Weka, REST API, Git, Semantic-UI, Bootstrap, L^AT_EX, MongoDB, MySQL, DB2

Prior-experience - SailsJS, MochaJS, Grafana, Elasticsearch, Kibana, Logstash, JIRA, MAVEN

COURSEWORK

BU - Machine Learning, Operating Systems, Artificial Intelligence, Data Analysis & Visualization, Data Mining, Software Engineering, Cloud Computing, Computer Language Theory, Foundation of Analytics, Web Analytics & Mining.

IIST - Computer Networks, Wireless Mesh Networks, Data Structures & Algorithms, Virtual Reality, Information Theory.

SELECTED ACADEMIC PROJECTS

Codes available on github : <https://github.com/amalrkishna>

MBTA arrival time prediction: This project aims to make good travel time predictions for both route and segments of route with the train GPS data, prior knowledge and real-time traffic using various ML algorithms like XGBoost Regressor and artificial neural networks. The models were developed using Python, Xgboost, TensorFlow, Keras etc. A mean absolute percentage error (MAPE) of 7.9% was achieved using the most optimal model. An interactive application was build using R shiny to visualize real-time predictions.

ParknGo: ParknGo brings smarter, crowd-sourced parking and navigation solution on to every drivers finger tips. Boston-Hacks 2018 and Major League Hacking best hack for social good winner. The project is under active development through the BU Spark! Innovation fellowship.

MBTA Data Visualization & real-time app : Advanced data visualization methods with R & plotly was deployed on one week of MBTA data. Box plots, density plots, heat maps etc were plotted for travel, headway & dwell times to improve MBTA operations. Real-time MBTA app was devised with R, shiny & leaflet. App shows real-time position of trains in every subway line with real-time intensity of train bunching.

Job skill statistics in Django framework : Python, Django MVT framework & plotly was used to scrape large amount of Indeed data and make a data-driven website. Performed team leader role for Integration and Quality Assurance. I also worked on plotly data visualizations and website UI utilizing Bootstrap.

Boston Property Assessment : Boston property assessment dataset from Boston.gov classifies properties in greater boston area into it's present overall condition (Poor to Excellent). 4 classification algorithms (Naive Bayes, Random Forest, IBk and Decision Table) were modeled utilizing 5 different selection attributes in Weka. Performance measures such as TP Rate, FP Rates, ROC Area etc were used to determine overall performance of each classifier model.

Maze Runner 2.0 : Navigation in a Virtual Environment utilizing IMU MPU-6050. Developed a hardware implementation to navigate in a virtual environment constructed in OpenGL by leveraging a low-cost Inertial Measurement Unit(IMU) MPU 6050.

LEADERSHIP & ACTIVITIES

BU Spark! Innovation Fellowship	2018
BostonHacks 2018	2018
Wins in two categories - Fellowship and Authorize.net API	
Major League Hacking	2018
Best hack for social good	
ACM & IEEE Student Member	2015 - 2018
Computer Science Tutor — Chegg.com	2016 - 2017
Taught & Mentored 150+ high school & university students in CS & Python/C++/Java/JS Programming.	
Creativity Leader	2015
<i>Led Conscientia 2015</i> , Annual Astronomical & Technical Fest, IIST	
Finance & Creativity Leader	2014
<i>Led Dhanak 2014</i> , Annual Cultural Fest, IIST	