SYAMALA BALASUBRAMANIAN

APPLIED MATHEMATICIAN/DATA ANALYST

Phone
+1 (631) 974-7982

Email
rbsyamala@gmail.com

SUMMARY

Skilled data wrangler looking for an entry level position to assist your organization to glean business insights from data, using mathematical and statistical models. Versatile, heads-down, team player with strong communication skills, requiring minimal oversight to deliver compelling results using Agile methodology. Strong work ethic, with solid references. Looking for opportunities in the Health Care Industry in Information Technology

SKILLS

- Java
- Python
- C++
- C
- R language
- SAS
- MATLAB
- MySQL

WEBSITE

https://www.linkedin.com/in/syamalabalasubramanian/

https://github.com/SyamalaB/TO-CRACK-THE-KNAPSACK-CRYPTO-SYSTEM/tree/AMS595

AWARDS & HONORS

- Awarded the **third** prize in the "**Ramanujan** 125, Mathematics Talent Test-College Level" in 2013 conducted by **RIASM,** University of Madras
- Awarded the **Miller Medal** in 2015 for being the best outgoing student for the entire college by the Deputy Director General Of the **Indian Foreign Service**
- Selected all over India for the **MTTS Program**" from May 20, 2013 to June 15, 2013; Funded by **National Board for Higher Mathematics** at **SVNIT, Surat**

PROFILE

- ✓Keen ability to draw insights from raw data using mathematical techniques and code.
- ✓Expertise in transformation of large data sets suitable for modeling.
- ✓Apply statistical and advanced techniques to build data mapping and models

WORK / RESEARCH EXPERIENCE

GLIMM ANALYTICS LLC, NY — 2018-Present

Financial Analyst

Transferred my skills in Optimization, Analysis and Computing to a commercial context in the financial sector. Worked in the area of Risk assessment and Data Science. Developed tools for multi-period risk assessment. Created C++, R, MATLAB source codes for algorithms with sampling techniques for accuracy at extreme levels of probabilities.

AIR TRAFFIC SIMULATION — December 2017

Built a simulation model to minimize the average departure/arrival waiting time of planes before takeoff/ landing in C ++ language. Built a discrete state, dynamic, stochastic, variable driven simulation program and constructed a prime modulus multiplicative linear congruential generators and applied inverse-transform method and Box-Muller method to the data.

DATA ANALYSIS ON WINE QUALITY DATA SET — December 2017

Used multiple linear regression test to find which factors affects the wine quality.Used Logistic regression to verify the result and stepwise regression to avoid multicollinearity. Used bootstrap, Levene's test and Fligner-Killeen test to check for homogeneity of variances of the red wine and white wine data.

CRACKED THE KNAPSACK CRYPTO SYSTEM — November 2017

Created a Merkel-Hellman Public Key Cryptosystem and solved the knapsack problem using extended Euclidean algorithm and the private key. Implemented the LLL algorithm to crack the Merkel-Hellman Public Key Crypto system in MATLAB.

EDUCATION

StonyBrook University NY — 2016-2018

MS APPLIED MATHEMATICS AND STATISTICS

Statistical Computing, Data Analysis, Linear Programming, Simulation and Modeling, Stochastic Models, Scientific Computing, Discrete Mathematics, Communicating Science: Distilling Your Message, Computational Geometry

Madras Christian College, Chennai, India — 2014-2016

MASTER IN MATHEMATICS

Cryptography, Graph Theory, Ordinary and Partial Differential Equations, Java Programming, Topology, Fuzzy sets and their Applications, Formal Languages and Automata, Theory of Computation, Differential Geometry, Mathematical Statistics