**Sureshkumar P Kuttan**

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**EDUCATION**

**Stevens Institute of Technology** , NJ

**MS in Financial Engineering** (Completed – Dec 2011) Current **GPA: 3.967**

* **Financial theory and modeling** : Options, Black-Scholes formula, interest rate swaps, continuous time finance, stochastic processes, interest rate models, credit models, algorithmic trading strategies
* **Risk and portfolio management** : Univariate and multivariate statistics, market modeling and portfolio optimization, regression and principal component analysis, VaR, stress test, risk management, time series analysis
* **Computing techniques:** Application of C++, MATLAB and VBA in financial settings for Monte Carlo simulation, Database framework, Crystal Ball.
* **Course Work:** Designed and extracted market data to optimize portfolio with mean-variance, Monte Carlo Simulation of different types of Option using Design Patterns in C++. Implementing MACD trading Strategy
* **Project Work Monte** Carlo Simulation, Variance reduction, American Options using Monte Carlo Simulation, Monte Carlo Greeks. Creating models in Excel
* **Simulation and Modeling**: Developed models and simulation concepts and analysis necessary to design, program, implement, and use computers to solve complex systems/products analysis problems. Problem formulation, model building, data analysis, solution techniques, and evaluation of alternative designs/processes in complex systems/products.
* **Logistics and supply chain management**

[**Graduate Certificates**](http://sse.stevens.edu/academics/graduate/graduate-certificates/) **in Financial Software Engineering**

* Fundamentals of Software Engineering
* Software Architecture and Component-Based Design
* Stochastic Calculus for Financial Engineers
* Pricing and Hedging

**Bachelor of technology in Computer science and Engineering**

**College of Engineering ,Trivandrum, Kerala. INDIA**

**Completed Python for Finance (4 Day training ) given by Continuum Analytics**

## **PROJECT EXPERIENCE**

**AFLAC Global Investment 05/2017 – Current**

**Senior Python Developer.** FX Trading

Developed and maintained a key ETL System in SQL Server and Python, used for analysis by the Quant Team for FX Trading. The system manages a wide variety of feeds from Bloomberg, Reuters and BlackRock (Aladdin) systems, and so on.

Produced a feasibility study to replace the home grown ETL with the Python package PETL - [http://petl.readthedocs.io/en](http://petl.readthedocs.io/en/latest/)

**Bank of America 01/2016 – 04/2017**

**Senior Python Developer.** Futures and Options Group

Built a rule based engine to calculate portfolio risk using a proprietary BofA framework in Python called Quartz.

Worked on the Development, Analysis, Unit Testing and Maintenance of an application for the middle office for Futures and Options risk management.

Created  a Data Mart using Oracle 12c and Python which was the main data source for near Real-time reporting for the middle office. Developed the SQL used to extract  data for the Front End UI. Created ad-hoc reports for business users and APIs to load and extract data from a reporting database.

**Technologies**: Python, OODB (Sandra), OOD, Schedulers (bob), UI (C#/WPF, Python), Threading, QZT tables (similar to pandas), Twisted, Agile Methodology

**Verizon Wireless 10/2005- 12/2015**

**Cslt-Finl Business Intelligence &Ops**

Developed and implemented automation of new and existing processes utilizing database and process management skills to improve efficiency of reporting and Analysis.

Reviewed, analyzed and prepared explanations of company-wide and area financial and customer results and performance for Senior Finance Leadership including:

* Used various Software and programming Language like Python, Teradata, Unix , Excel, structures, Algorithm etc
* Worked on all phases of data warehouse development lifecycle, from gathering requirements to testing, implementation, and support.
* Data cleansing, data quality tracking and process balancing checkpoints
* Create flexible data model design that is scalable, reusable, while emphasizing performance and business needs.
* Exceptional background in analysis, design, development, customization, and implementation and testing of software applications and products.
* Provided analytical insight and a more in-depth knowledge of the results and trends. The suite of critical financial and performance metric reports is delivered at each month and quarter end close and provides senior executives with the necessary information to make important business decisions.
* Developed Python code automate and do data analysis on a day to day basis .
* Used SQL to extract data from Teradata and Sql server database for the business reporting

Teradata, SQL , Python(NumPy,Pandas,SciPy), UNIX , MS Excel, VB, ActiveBatch 8 Scheduler ,Sql Server , SSIS, Agile Methodology , SDLC, Tableau

**Senior Systems Analyst**

Usage Broker: Involved in the Architecture and Design for this project. It is Java based product to Route and Enrich the Call usage records to Various Billing and Non Billing Systems in Verizon Wireless . The System currently handles about 4.5 billion Call detail Records per day and routes them to the right Subsystem on a Near Real Time basis

**Responsibility:**    

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| **•** Design of a new high performance  Telecom Rating engine    **•** Implemented various process and performance improvement in the current systems  **•** SME (Subject  matter Expert )  for  the  various  process in  the  Telecom Rating engine (Real time  Rating, Allowance Calculation, routing the usage to the Right Instance, Decoding different  Usage on a Real Time)  • Participate in the critical application fixes of production system.  • Presented application architecture to the external teams and new team members.  **Environment Used in this Project** : Linux C, C++,Data structures, Algorithm, STL, Python ,Digital Route APL ,ETL ,Oracle ,Sql\*plus ,Unix,linux, Agile methodology |
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**FUJITSU Consultant to United Parcel Service IAS (Incentive Admistrative System) 03/98-10/05**

**Senior Consultant**

**Major sub project in UPS**

Improved and enhanced Incentives Administration system with new functionalities such as ‘Commitment Service Grouping’ that displayed pre-defined commitment service groups for pricing analysts to select; ‘Incentive Adjustment’ for re-calculating the pricing incentives automatically without user manually modifications; ‘Multi-country Incentives’ that provided the ability to create a contract based on all shipping activities across Euro countries; and ‘Import Incentives’ to expedite the contract creation process. • Participated the implementation of ‘World Wide Contract Pricing ’, a Java web application which allowed incentive executives to perform What-If incentive analysis and generated the UPS gross/net revenue reports in PDF format. • Designed and Developed a Window NT 4.0 client/server Incentives Administration system with Visual Basic user interface, Oracle PL/SQL middle tier, Oracle database and COBOL CICS/DB2 back-end. Technologies included: Visual Basic 4.0/5.0/6.0, Oracle Objects for OLE v3.5, Java, XML, XSL/XSLT, PL/SQL, UNIX Oracle 9i/11i, Microsoft Access 2000, and CICS/COBOL

**Environment Used in this Project** : HP/UNIX C ,Oracle ,SQL\*plus , PL/SQL,IBM 3090 Z/ESA, CICS, DB2, COBOL, SQL, QMF, JCL, TSO, VSAM, FILE-AID/DB2, XPEDITER, INTERTEST, IDCAMS, Strobe, iStrobe , MQ Series, Easytrieve

**Syntel Inc, Troy, MI. AIG 12/96-03/98**

**Senior Programmer Analyst**

**Responsibility:**

* Participated in **analysis, design, coding**, code reviews, testing and implementation
* Developed and unit tested COBOL programs which interface with C Programs
* Involved in numerous critical production fixes and recoveries

## **British Telecom Limited Plc UK** **02/96-12/96**

**Senior Software Engineer.**

**Responsibility:**

* Interact with the with high level management to generate reports for them from the Data warehouse
* Developed SQL in mainframe and to convert for PC based software like EXCEL
* Involved in creating Standards for the data to be stored in the Datawarehouse

## **Mahindra-British Telecom Limited 04/95- 02/96 Software Engineer**

**Responsibility:**

* Interact with Users in UK from offshore in Bombay
* Participate in **analysis, design, coding**, code reviews, testing and implementation
* Was Involved in production Support

**MORGAN STANLEY & Co. Ltd. 1/95-04/95**

**Software Engineer**

It was a pilot project which was a on-line table maintenance sub system It mainly had four programs or modules 1) Main module is where the user first encounters and cording to the data entered by the user controlled is passed on to one of the sub module

## **R S Software India Ltd.. 12/93-01/95**

**Software Engineer**

Computerized activity tracking system (CATS) has been designed to keep track of the activities in the office and to produce the necessary report for the higher management to evaluate the employees and keep track of the activity's in the company.