

MAUREEN P. MAYER

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www.linkedin.com/in/MaureenPMayer,

Professional Summary

A Data Scientist and Engineer experienced in Algorithm Development, Simulation Model Development, Test and Analysis, Statistics, Systems Engineering, Utility and Process Modeling, Analytics, Data Science / Machine Learning (Matlab, R, Java, C++,#, Python), Defense Applications, Algorithm Development, and Simulation, in all phases of Agile development. Excellent Computational and Applied Statistics Skills and Personable. A collaborative team member and leader for groups of technicians in dynamic research and environment.

- Possess excellent knowledge of statistical software like SAS, R, MATLAB and SPSS
- Extensive knowledge of programming UNIX and other high-level languages
- Experience in Event & Model Based Simulation
- Cloud and Distributed Systems Architecture
- Employs evidence based campaigns and strategies
- Radar, Sonar, and Digital Signal Processing (DSP); C4I, Possess good analytical and problem-solving skills
- All phases of the Software Development Cycles
- Excellent team player with high level of personal initiatives

Security Clearance / Education

Top Secret

M.S., Statistics, Boston University, Additional Coursework Montana State, Johns Hopkins Universities,
B.S., Mathematics (Statistics), Boston University

Professional Experience

RTX Technologies

Principal Systems Engineer

Marlboro, MA Nov 2023 – July 2024

Led IV&V of SoS SPY-6 simulation, managing requirements, developing automated framework providing Monte-Carlo pass/fail assessment of live to simulated outputs on various metrics. MATLAB

BAE

Principal Systems Engineer

Nashua, NH Oct 2019 – Nov 2023

Developed and assessed Cognitive Capability and Image Processing Algorithms. MATLAB, PYTHON. C++..

FishEye Software

Maynard, MA May 2017 – Oct 2019

Software Architect/Engineer

Sustaining C++ and shell scripts for MDA common back end (CBE) radar software. Contributed to RMF cyber-security preparation for accreditation of a stand alone networked system Windows Host OS, AIX, VMWare, with a RHEL Guest OS.

P3I Inc. /OASIS Systems

Lexington, MA April 2015 – May 2017

Senior Systems Engineer

Project Management and the Technical team Liaison. Developing a standard architecture in conjunction with Integration Engineers while adhering to AFLCMC standard processes Attended conferences, meetings, test events, and boards for the purpose of providing input to the design, development and configuration of enterprise software. Participated in requirements development for software modernization. REST-ful Cloud based architecture, MS Access, Visio, MS PowerPoint, SharePoint.

Symbotic LLC,

Wilmington, MA , Jan 2012 - Jan 2015

Project Engineer

A Simulation Lead. Developing Scheduling and Optimization Algorithms to support simulation and analysis of automated warehousing. Verification, validation, risk reduction, and presentations on actual data.PlantSim, C#, C++, Python, Ruby, SQL, R.

Fisheye Software at BAE Advanced Information Technologies, Burlington, MA May 2011- Oct 2011

Senior Software Engineer

Contributed to a Conceptual, Logical, and Physical Design and Implementation of a Metrics Framework and Catalog for the DARPA META project with goal of reducing design integration time fivefold (Java, SOA, Agile Development, STS, SVN, Maven, Hibernate, HTML, Javascript, AJAX, JSON).

Raytheon

June 1998 - Nov 2010

Raytheon Integrated Defense Systems,

Woburn, MA, Sept 2007 - Nov 2010

Senior Systems Engineer II

Collaborated Missile Defense Agency(MDA) tracking and classification algorithms of the Advanced Algorithm Group. Java coded CRAD Satellite tracking simulation components (Linux, Windows, Java, JBOSS, SOA, MySQL, DSA,J2EE, Eclipse, PMD).

Improved Discrimination Java Bayes-Network Simulator and Mixture Model Classification and Clustering Algorithms. Performed sensitivity analysis, model development and verification. Reviewed proposed RADAR signal processing anomalous detection algorithm (Matlab, DSP, SVN, ASE in addition to above). Maintained end-to-end MDA Radar simulation following peer review process and configuration control (Cygwin, Solaris, C++, DOORs, Rhapsody also). Simulated and Assessed Algorithm Performance using live data. Customer Elicitation of suggested improvements. Developed Work Instructions and System and Subsystem Requirements.

(Software Laboratory)

Tewksbury, MA, Sept 2000 - Sept 2007

Raytheon Senior Software/Systems Engineer II

Assembled cohesive system safe and secure (multi-level Role Based Access Control) systems, data architecture, and configuration item requirements for a state-of-the-art total ship computing environment infrastructure for Next the Generation US Navy Littoral Combat Ship (DDX TSCEI). Produced trade studies, white papers and work instructions so that each part of the system fits coherently to produce a fully integrated ship. Supported DDX from Proposal to Spiral Release 5. Introduced a distributed Infrastructure Resource Manager, Reviewed IDL interfaces and Java Infrastructure submissions receiving Team Award 2003. Developed Family of Ships (FoS).Product-Line. Received Inventor and Author Award 2004, Raytheon Team Outstanding Results Award 2006, Certificate of Recognition 2008 (DDX Award fee on Phase 3 contract 95.65% and on DDI Contract was 96.85 %.). Certified in IEEE OOAD.(Unix, Windows, Java, MySQL, XML, Solaris; C/C++, Matlab, CORBA, LDAP, BEA WebLogic, Rational ROSE, Clear Case, HDF5, GIG, DIB, SOA, DSA).

(Integrated Defense Systems)

Tewksbury, MA, Jun 1998-Sept 2000

Raytheon Senior Systems Engineer

Designed SM-2 BLK-4A missile test and SIMULINK simulation. Updated post processing requirements Midcourse Radar (XBR) (Unix, C/C++, Ada, Matlab, DOORs). Led X-Band Radar Post Processing Software Requirements Team to develop the gold standard for the GBR-P and THAAD programs. Proposed accepted improvements to XBR Mission Application Processor (MAP) radar signal processing requirements. Mentored Software Development Team. Created a test script generator and, verifying with SIMULINK. Developed a simplified test plan (SM2-Blk4a) to contain test costs.

Institute for Business and Home Safety

Boston, MA, Jun, 1997-Jun 1998

Research Analyst

Consolidated multi-source catastrophic weather event property loss data from insurers to produce a Horowitz-Thompson total loss estimate for customers of this insurance consortium. (Windows, Large Data Set, ETL, C++, GIS, MapInfo, SQL Server, ASE).

JHU Applied Physics Laboratory

Baltimore, MD, Sept 1994-Jun 1997

Senior Systems Engineer

Collaborated on CEC and SSDS Algorithm Simulation (Extended Kalman Filtering & Association). Engineered CIWS super resolution algorithm and supported Ship Self Defense System live fire testing, provided quick look reports and subsequent analysis (Unix, Windows, HPux; Malab, C/C++, MapInfo, Perl).

Lockheed Martin

Moorestown, NJ, Nov 1983-Aug 1987

Radar Engineer, Advanced Algorithms Group

Developed and evaluated AEGIS Radar advanced algorithms (Unix, Windows, Visual Basic, ASE, Fortran).

Technical Skills

Platforms: VMs, AIX, Linux, Solaris, Windows, Servers, emulators (cygwin, putty)

Languages: Java, C++, Python, LaTeX, SQL, R, SPlus, SAS, SPSS, Visual BASIC

Database: SQL Server, MS Access,

Development Tools: Eclipse, Log4J, STS, Maven, Ant, Tomcat, GIT, SVN, CVS, VMWare, PMD static code analysis, Perl, Python, DOORs, JBuilder, MS Visual Studio, SUN GDE.

Mathematical Applications: Matlab (Simulink, GUIs), Mathematica, Maple

Other: Optimization, Data Mining, MapInfo, Maptitude, Digital Signal Processing, Image Processing and Pattern Classification, Regression Analysis and ANOVA, Multivariate Statistics, Generalized Linear Models, Time Series Forecasting and Analysis, Stochastic Processes, Nonparametrics, Categorical Data Analysis.

Awards/Publications

- American Statistical Association, Distinguished Boston Chapter Service Award, August 2017
- Raytheon Author's Award for "Fault Tolerant CORBA Component Model", OMG Real Time and Embedded Systems Workshop, July 14th, 2004.
- Published Paper: Patz JA, Strzepek K, Lele S, Hedden M, Greene S, Noden B, Hay SI, Kalkstein L, Beier JC. Predicting key Malaria transmission factors, biting and entomologic inoculation rates, using modeled soil moisture in Kenya. J Trop Med International Health 1998; 3 (10): pp.818-827.

Affiliations

BCASA Chapter Rep and Previous District 1 Vice Chair Boston Chapter American Statistical Association
Member American Association for the Advancement of Science

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