Please initiate contact through email.

Keith A. Pray

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Summary

Leader, Computer Scientist, and Software Engineer with 25+ years of experience solving problems by designing and building quality software in companies and teams of all sizes and academic research roles
- History of improving team productivity and efficiency by orders of magnitude
- Strives to develop keen insight to find true, simple solutions to complicated, real world problems
- 22+ years providing technical team leadership
- 21 years Java development experience as primary language
- 17+ years providing university computer science education
- 9+ years managing engineering employees

Experience

Awards sample:

-BAE Impact: Interviews

-BAE Impact: Ingenuity, flawless execution in face of pandemic challenges

-BAE Impact: Tireless execution through unanticipated issues

-BAE Chairman's: Bronze, Silver nomination

-BAE Impact: Alternative Display Solution

-BAE Impact: 20% Functionality Delivered Ahead of Schedule

-BAE Impact: Great Place to Work Diversity & Inclusion

Software Engineering Manger III, BAE Systems, ES –NH, MA**:** 09/2004 - present
Software Development Environment Lead - Digital Transformation, DevSecOps, Agile, Metrics, Training
- Led creation and delivery of 26 live and 2 asynchronous training modules by 24 authors across several sites and time zones

A leader of ES Sector Engineering Excellence, Governance, and Process of 5500+ engineer organization
- Supported AS9100D audits achieving PEAR scores of 4-5 through 50+ activities
- Coordinated Corrective Action Review Board. Increased available analysis time 233%. Reduced manually generated materials 63%. Reduced quarterly meeting time 50%. Led 250+ improvement tasks to completion.

Software Manager / Architect - Reported to Software Director of 160 engineer organization
- Direct technical leadership and functional management of 25 SW engineers across multiple sites

Principal Software Investigator: IRAD – Defining EW SW architecture of the future
- Illustrated paradigm for flexible deployment and concurrency while eliminating typical multi-threading issues

Software Lead: DARPA Cognitive EW – Hands on lead for multi-discipline engineering team
- Developed integrated Earned Value Management and Jira process reducing metric reporting to 10 minutes/week

Technical Lead: Map Display – hands on lead and architect in program of 65 SW Engineers
- Upon joining saved $2 million estimated development costs and recovered an existing 2 month schedule slip
- Recaptured 50% of primary mission equipment screen real estate from competitor
- Reduced defect resolution and regression testing overhead of feature rich product from 1 week to 4 hours
- Led addition of 30 features, requirements through integration and test, on schedule and within budget

Productizing Lead: Tracking and Fusion reporting to Business Area Director of 30 engineer organization
- Aligned source control and build to support maturation of research capabilities and releases to multiple customers
- Inserted automated testing, coverage, static analysis, run time performance, and dependency metrics
- Reduced average defect identification time from 4 weeks to 1 day

Capability Lead: UAV Auto Routing High-Speed Emergency Replanner in program of 25 engineers
- Increased average code review effectiveness from 1 to 10 major defects found across all program projects

Chief SW Architect: System of Services Preparation and Planning Fires and Effects Planner
- Customer appointed role leading 25 engineers from 2 companies on East and West coasts
- Implemented deployment reversal of 300K line code base in 6 month spiral with no cost or schedule impact

Adjunct Instructor, Worcester Polytechnic Institute (WPI), CS Department - Worcester, MA**:** 05/2004 - present
Courses: CS 525W Web Ware, CS 3043 Social Implications Of Information Processing.
Research Scientist / Engineer, Bioengineering Institute (BEI), WPI**:** 09/2002 - 08/2004
Cultivated business opportunities for novel data model and user interface technologies, Provisional Patent awarded.
Research Assistant, Center For Research In Exploratory Data And Information Analysis, WPI**:** 09/2002 - 12/2002
Geo. I. Alden Fellow, BEI, WPI**:** 02/2002 - 09/2002 – Authored Sheriff's Office technology plan, data model, GUIs
Design Engineer / Performance Analyst, EMC Corporation - Hopkinton, MA**:** 06/1998 - 10/2001
Performance Analyst: Characterized and optimized Backup Restore Solution
- Realized 20 fold team productivity increase initiating and leading continuous improvement effort
- Provided performance white papers, inference engine expert system, and support to sales and field engineers

Software Engineer, Scope Communications - Marlborough, MA**:** 1997 - 1998 - Created intelligent GUI widgets
Software Consultant, 3Com - Marlborough, MA**:** Summer 1996 - Implemented a manufacturing quality database.

Skills

Technical: Architecture, Design, Implementation, Testing, Integration, Product Size Estimation, Schedule Planning, Requirement Derivation, Algorithm
Tools: Java, Akka, JSF, JSP, JavaScript, XML, X/HTML, *NIX, BSD, Mac OS X, Windows, Jenkins, Eclipse, Git, ClearCase, Weka, Emacs, Apache [Web Server | Tomcat | TomEE | Shiro | Log4j], Primefaces, CesiumJS, Google Earth Plugin, Coverity, Fortify, Jira, Collaborator, MS Office, Doxygen; *Previous Experience In*: C/C++, Prolog, Scheme/LISP, Rational Rose, Subversion, Test Track Pro, LaTeX
People: Recruiting, Behavioral/Technical Interviews, Performance Leadership/Management, Mentorship, Career Development, Delegation
Process: Continuous Improvement, CMMI V2.0, AS9100D, AS9145, Technical Product Review, Meeting Facilitation

Education

PhD in Computer Science, Worcester Polytechnic Institute (WPI) - Worcester, MA - In Progress
Master of Science in Computer Science, WPI - 2004 **Thesis**: Time Sequence Association Rules
Bachelor of Science in Computer Science, WPI - 1998 with High Distinction **Thesis**: Machine Vision Billiards

Publication

Mining Expressive Temporal Associations from Complex Data, Machine Learning and Data Mining in Pattern Recognition: 4th International Conference, MLDM 2005, Leipzig, Germany, July 9-11, 2005. Proceedings.