Malwattage S. Kumar Peeris

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Accomplished conscientious professional with 35+ years of experience with software development, project coordination, customer interface and University Level Instructional. Project lead and Broad range of technical experience in software integration, configuration and problem management, Software Development, and end-user support. Strong communication skills, a pro-active approach to problem solving vetted in the US Government DoD Software Projects including NASA Shuttle program and Pentagon.

Specialties: Object Oriented Design and Analysis with extensive experience in the full life cycle of the software design processes - Waterfall, Agile and Incremental, Customer Interface, Computer User Support, Teamwork and Collaboration, Problem Management, Software Proficiency, Testing, Training; A well rated University Adjunct Professor (Part time)

Skills & Experience Summary

- Very Strong knowledge of Programming Languages such as Java, C/C++, Ada, C# &ASP .NET Framework, XML, XHTML, JavaScript, AJAX, JQuery, DHTML and DOM Technology & UML.
- Very Strong in Object Oriented Methodology and Techniques, design patterns and implementation
- Well experienced in development environments such as Netbeans, Eclipse, Workbench, Visual Studio, and .NET Framework
- Well experienced on Java JSP & Servlets development
- Well experienced in Software Development and Integration & life-cycle planning
- Well experienced with the in Sun/Solaris, Unix/Linux/Scientific Linux operating Systems
- Exposure to SOA, Rational Rhapsody and DOORS
- Experienced in SCCS, CVS, GIT & SVN(Subversion) configuration/repository control systems
- Experienced in Database Management Systems and hibernation techniques.
- Well experienced with the vxWorks Real-Time Embedded Operating systems for Power PC with Kontron / Thales /Cetia PowerEngine VMPC6a-Dual for the PowerPC 750 CPU.
- Well exposed to Aircraft Simulation Software (Flight Software)
- Self-motivated, able to work with minimal direction
- Very Good Verbal, written, communications and inter-personal skills
- Excellent Instructional skills and Experience

Current Position: Senior Staff – Lead Software Engineer
Employer: **Leidos/**Lockheed Martin Corporation
Experience: 26 Years

Work Experience – United States Department of Defense Projects

DCPDS/Pentagon/Military – Jan 2014 – to-date

Responsible for performing the software systems development function, including the design, development, troubleshooting, and debugging of software programs for software enhancements and new software-intensive systems and products.

Duties include software requirements analysis, development of software products and software tools used for design, development and maintenance of infrastructure, and platforms. Determines hardware compatibility. Responsible to apply advanced technical principles, theories, and concepts.

Selects, develops, and evaluates personnel to ensure the efficient operation of the function and achieve key project/program objectives and deliverables.

Responsible for multiple technical areas. Develops solutions to complex technical issues and problems that impact customer disciplines.

Duties include regulating/employ ingenuity and creativity to develop new technical solutions and systems in order to achieve functional objectives.

Communicate with internal team members and client team members.

Works to influence project/team leaders regarding solution design, process and/or approaches.

Hold team meetings, update project status.

Provides Software Development Support, Leadership and Mentoring to the Defense Personnel Data System (DCPDS) human resources Information System Department of Defense Civilian Workforce. Application development is 100% passed on Java J2EE architecture, Bean Technology, JSF/PrimeFaces on the server side and HTML/Javascript/DOM/AJAX on Client side. Backend data persistence support on PL/SQL and JPA.

NASA-JSC/FDOC: International Space Station – Training System (TS21): July 2011 – Jan. 2014
Staff Software Engineer/Technical Mentor for the Crew Station Software Development team for the International Space Station's Training System (TS21; Involved in design, development, testing and integrating new software for the Crew Stations' Training Software; This responsibility includes intensive analysis, complex algorithm development, manipulating extremely large data sets that support the International Space Station's Training System. Usage of COTS (Commercial off the Shelf) software is part of this development; Builds or use proper testing tools using my Excellent Knowledge of the Java Programming Language. Additionally, mentoring the Software Development Team by holding Object Oriented programming language training classes sporadically; Provides Object Oriented Based technical advice for the new software design/development team; Excellent knowledge of legacy programming languages like Ada and C++; Support and meet the TS21 software development goals.

NASA-JSC/FDOC: International Space Station: February 2010 – March 2011
Provide software support for Flight Design and Dynamics Division of Mission Operations Directorate at NASA Johnson Space Center. Member of the Security subsystem software development team that integrates with facility authentication services to verify the identity of International Space Station's Core Trajectory System users and to provide encryption/decryption services to protect the confidentiality of sensitive Core Trajectory System data.

The Security subsystem utilizes Java Authentication and Authorization Service (JAAS) login modules to integrate with facility authentication services and Java Cryptographic Extensions (JCE) for all cryptographic services such as encryption and decryption, key generation, and message digest.

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NASA-JSC: Space Shuttle Program/ Aircraft Simulation Project (Oct. 1996 – Feb. 2010)
Lead Technical Engineer: May 2006- February 2010

Served as a lead technical Engineer and coordinated a team of Software Engineers on the Shuttle Trainer Aircraft (STA) Support Software projects for Johnson Space Center/NASA. Worked with technical staff to understand and develop resolution of software problems.

- Resolved customer complaints with software and responded to suggestions for software modifications or enhancements; assisted in the training of less experienced software development staff.
- Instructed, directs, assigns tasks, and monitors the performance of assigned Software Developers working in the project.
- Assisted in the scheduling and coordinating of projects and participates in different phases of the project; Participated in the development and upgrade of software process artifacts.

C&S Engineering/NCI Building Systems (February 1992 – October 1996)
Software Systems Analyst

- Worked on Analyzing and Designing complete software packages to repair, retrofit and new construction activities for non-residential large metal buildings
- Built C/C++/windows and Fortran based software applications. Fortran was used as the back end Engineering functions to supply data for the C/C++ /Microsoft Windows based front ends. Custom software I worked on had the complete design, detailing, and bill of materials for the building concerned. Internal information was used by the software packages to calculate an accurate building price.

RICIS – Research Institute for Computing and Information System – University of Houston Clear Lake (August 1991 – December 1992)
Analyst/Programmer

- I Worked as a software developer to support NASA/Johnson Space Centers' MISSON project. Part of this project I worked consists of writing Ada Programming Language based software components for the Astronauts Backpack.
- I also wrote documentation to support the said software.
- Conducted research, provided technical support to coordinate the research that integrated technical results into the goals.

Software Technology

3 years of Software Design, Development, Unit Testing, software integration with large scale software system that supports the NASA's International Space Station Training System.

- Worked as a major contributor in the International Space Stations' Training System Software System Re-host (TS21) project.
- Works as the technical lead/Mentor for Object Oriented Design and development activities.
- Major Contributions to successful Software Releases to achieve customer goals.

14 years of Software Design, Development, Unit Testing, integration of Real Time Embedded flight software systems for Johnson Space Center's Space Shuttle Program's fleet of Shuttle Trainer Aircrafts' **Digital Avionics System (DAS).** As a senior engineer I have:

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- Worked as a major contributor in the Shuttle Trainer Aircraft's Multifunction Electronic Display Subsystem (MEDS) project that upgraded the aircraft instruments such as HSI, AVVI, AMI, ADI of the shuttle trainer aircraft.
- Played a major role in the ADAS Software Upgrade and IO30 software releases
- Led the IO29 software release.

As the lead, I was responsible for all support software systems of the Aircraft Simulation Project. This included the responsibility for the following tasks:

- Led the support software team that does the development and incremental modifications of all Support Software Systems for the NASA's Space Shuttle Program's Aircraft Simulation Project. Supporting the ADAS software upgrade to VxWorks 6.3 operating system.
- Offered consultations to the management on Systems and Software Engineering Process and Process modifications and improvements.
- Offer consultations to the management to introduce new software technologies.

5 years of Software Design, Development, Unit Testing, integration of software packages related to Civil Engineering/Metal Building Industry.

Instructional

Adjunct Professor (University of Houston – Clear Lake 1992 – to date):
Teaching Computer Science and Software Engineering curriculum courses 1992 – to date.
I have been teaching following courses:

Undergraduate Courses

Web Application Development	Data Structures
.NET Framework with C#	Database Management Systems
Software Development with Java	Ada Programming Language
Advanced Software Development with Java	C Programming Language
Object Oriented Software Design with C++	
Graduate Courses	Advanced Internet Application Development

Adjunct Professor – Texas A&M University – San Antonio TX (2015 – to date)
Teaching Computer Science and Software Engineering curriculum courses 2015 – to date.
I have been teaching following courses:

Scripting Languages	Management Information Systems
Software Engineering 1	Systems Programming

Committees and Memberships

- Served as the Co-Chair of the Industrial Advisory Board (2007-2012) – University of Houston – Clear Lake
- Member of the Faculty Senate Standing Advisory Committee (2008-2012) - University of Houston – Clear Lake

Research Papers

RICIS/NASA
Advanced software development workstation - Knowledge base methodology- methodology for First Engineering Script Language (ESL) knowledge base / prepared for NASA-Johnson Space Center; Submitted

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by Michel Izygon, Kumar Peeris. [1993]. "Cooperative agreement NCC 9-16, research activity no. SR.02, NASA Johnson Space Center, Information Systems Directorate, Information Technology Division".

Professional Certification

- Sun Certified Java Programmer (SCJP)
- BrainBench Java 1 Certification, BrainBench Java 2 Certification.
- ExpertRating Java Certification

Professional Training

- **Stevens Institute of Technology /Teaching Science and Technology (TSTI)**
  A professional course on Applied Space Systems Engineering.
- **Lockheed Martin,** Foundation Leadership and Management.
- **WindRiver systems**
  WindRiver Systems – Tornado 2/VxWorks 5.4 Training
  WindRiver Systems – Tornado 2/VxWorks 5.1 Training

Corporate Training – Lockheed Martin

- **Early Leadership Program (EDLP)**

Education

- **MS. Eng. Mgt.** -Master of Science in Engineering Management University of Houston at Clear Lake, Houston, Texas (August 2009)
- **MS. CS.** - Master of Science in Computer Science / Software Engineering University of Houston at Clear Lake, Houston, Texas (May 1992)
- **BS. CS.** - Bachelor of Science in Computer Science, University of Houston at Clear Lake, Houston, Texas (December 1990)

Awards & Nominations

NASA Awards

- Silver Snoopy Award (Highest Award to NASA Contractor Employees) -July 2008, for excellent Technical Leadership on the AVaS (Advanced Validation System) upgrade project.

Lockheed Martin Awards

- Special Recognition Award-Technical Excellence (2006)
- Lockheed Martin Nominee - Top-Flight award for Exceptional Service 2005
- Aircraft Simulation Project – Outstanding Service Peer Award – May 2005
- Aircraft Simulation Project – Community Service Peer Award For Tsunami
- NASA Group Achievement Award
- Lockheed Martin Commendation for Exemplary Performance
- Short Term Achievement Award / Cash Bonus
- Letter of Appreciation, - MEDS Software Support (Shuttle Trainer Aircraft)

University of Houston- Clear Lake: Awards

- Adjunct Professor of the Year award (2009). (This is the first ever Best Adj. Professor award at UHCL)