Martti Meri

Role:	**Systems Engineer**
Birth year:	**1960**
Location:	**Helsinki/FI**
Description:	designing and implementing commercial and experimental; AI and high level language; small and large , information systems.

Languages

Language	Level
Finnish	Native
English	Native
Swedish	Fluent
French	Basic

Methods, Tools and Technology Skills

Beginner = no experience at all

Junior = has basic knowledge

Professional = can be considered as professional

Mentor = professional who has more experience and deeper understanding

Specialist = can be considered as specialist

Architect = superior skills

Name	Level	Experience	Total
Agile Methodologies	Specialist	1990 - 1995, 1998 - 2002	10 year(s)
Linux	Specialist	1998 - 2011	10 year(s)
Linux OS Toolchains	Mentor	1998 - 2007	10 year(s)
Prolog	Architect	1998 - 2002, 2008 - 2011, 2012	10 year(s)
C/C++	Architect	1990 - 1997, 2012	8 year(s)
AI Planning	Architect	1998 - 2012	6 year(s)
Simulation	Architect	1990 - 2014	6 year(s)
Automation	Specialist	1990 - 2012, 2014 - 2015	5 year(s)
Ontology	Architect	1990 - 1997, 1998 - 2002, 2008 - 2012	5 year(s)
Artificial Intelligence	Architect	1990 - 1995, 1998 - 2002, 2008 - 2015	4 year(s)

Control engineering	Specialist	1994 - 2015	4 year(s)
RDF	Mentor	2008 - 2011	4 year(s)
Java	Mentor	2003 - 2007, 2013 - 2014	3 year(s)
Teaching	Specialist	2010 - 2012	3 year(s)
Embedded Security	Mentor	1990 - 1997	2 year(s)
Middleware	Mentor	1994 - 1995	2 year(s)
Electronics	Beginner	1990 - 1997	1 year(s)
Means-end analysis	Specialist	1994 - 1995	1 year(s)
Statistical analysis	Mentor	1990 - 2014	1 year(s)
Testaus	Professional	2003 - 2007	1 year(s)
Testimäärittely	Professional	2003 - 2007	1 year(s)
Apache Wicket	Beginner	2013 - 2014	<not entered>

Professional Courses

Diploma on Project Management	Project Management body of knowlege (PMI/PMBOK) and agile methods	2015

Education

09/1981 - 11/1988	**Degree:** Ms in Sc (Eng)	**Institute:** School of Science,School of Science, Aalto University
	Studies: system and control engineering, information systems	

Project Experience

Project name	**Concentrating Solar Power - control and automation**
Customer	market and customer business
Period	19.11.2014 - 18.6.2015
Description	I worked a a Project Manager in a company developing solar power unit based on concentating techiques. The work included conceptual design of the palnt and collaboratin in the dynamics of the unit. This requires systrems engineering, simulation and control theory. At the moment the project is ongoing and I can not reveal more about it.
Roles	Project Manager - The feasibility analysis of complex industrial processes requires static and dynamic simulation using as input the data representing the material resources used and the environmental conditions applying (the system is an open system). I had the opportunity to use many of my earlier experiences in the management of this project on behalf of the company participating in the development consortium.
Skills	Artificial Intelligence, Automation, Control engineering
Leisure	

project	Generative social systems and agent based modeling
Customer	self employed
Period	1.1.2013 - 18.11.2014
Description	Updated by knowledge of recent trends in systems engineering. The systems are becoming social and spatio-temporal. People have urges that are related to locations, times and require participation and accordance of other individials. I took courses at the university and am still working in constructing an agent based simulator allowing study of some emergent system level phenomena in different kinds of systems, not only social, where atomic level rules for agents lead to systems level states or fluctuations that are difficult to cature and explain by other means.
Roles	Entrepreneur - This is an ongoing effort. The project still needs many kinds of shareholders and has been on hold for a while.
Skills	Apache Wicket, Java, Simulation, Artificial Intelligence, Statistical analysis
Project name	Case-based reasoning for process design
Customer	Tekes
Period	1.3. - 31.12.2012
Description	I was called in to participate in modelling of the leaching of ores in metals retraction. Machine learning module located nearest neighbors of the partial case in the case data base and searched for adjusted chains of atomic process tasks based on the earlier case experiences and domain knowledge model including physical, electrochemical, economical and environmental rules and constraints.
Roles	Researcher and Programmer - Prototype coding in C and Prolog. Providing technical assistance in the project and solving the problems in managing the search methods and machine learning techniques.
Skills	C/C++, Simulation, Artificial Intelligence, Automation, Ontology, Prolog
Project name	Teaching Artificial Intelligence
Customer	Aalto University School of Science and Technology
Period	1.1.2010 - 31.5.2012
Description	I lectured the course on Principles of Artificial Intelligence at the Aaltu University. The course included search methods, knowledge representation, propositional and first order logic theorem proving using resolution method, planning and things like turn bases games. Basic methods and related heuristics with pruning and search directing alternatives.
Roles	Teacher - I lectured AI course at university.
Skills	AI Planning, Artificial Intelligence, Teaching
Project name	Smart bases
Customer	Tekes, Nokia

Period	1.1.2008 - 1.12.2011
Description	I worked with using RDF-type tripple relations in constructing semantically joined junks of knowledge in the data bases and connecting them to their originating sources for establishing provenance. The works requires model checking type of approach for detecting inconsistencies and finding ways to mitigate them
Roles	Researcher and Programmer - The project used meeting scheduling as a case for studying the behavior of dynamic queries and commitments. Prolog and C were used in the implementation.
Skills	RDF, Ontology, Linux, Prolog, Artificial Intelligence
Project name	**Multi-modal maintenence manual**
Customer	Tekes
Period	1.1.2003 - 31.12.2007
Description	I implmented a model based diagnostic module to a system that accepted voice queries. The system was a collaborative efford by several universities and research institues, combining computational linguistics and diagnostics of several forms. Ontologies were a key part of the system.
Roles	Researcher and Programmer - This project had a very well defined goal but considerably dynamic set of technical requirements and integration needs. The data model, the ontology and the terminological base with synonyms of varying formality formed levels of representation.
Skills	Testaus, Testimäärittely, Java, Linux, Linux OS Toolchains
Project name	**Planning**
Customer	Ahlstrom
Period	1.8.1998 - 31.12.2002
Description	AI Planning system for industrial plant delivery projects was implmented in this project where I acted as a researcher and program coder. This type of program requires heuristic methods for limiting the part of the state space that is searched for solutions.
Roles	Researcher - Action representation schemata, work flows, Prolog programming, search methods.
Skills	AI Planning, Agile Methodologies, Linux, Linux OS Toolchains, Ontology, Prolog, Artificial Intelligence
Project name	**Power transmission fault diagnostics**
Customer	Fortum
Period	1.9.1990 - 30.11.1997
	Codes a AI rule-based system for fault analysis. Then rewrote the control room version in C.

Description	Research engineering and the project management. The system was installed to control room and marketed in collaboratin with the French fault recorder manufacturer.
Roles	Project Manager / Research Engineer - First I collaborated in The AI part, then individually implemented the C version. In the later phases I managed the projecty.
Skills	Agile Methodologies, C/C++, Embedded Security, Electronics, Ontology, Simulation, Artificial Intelligence, Automation, Statistical analysis
Project name	**Particle physics automation**
Customer	CERN
Period	15.6.1994 - 31.7.1995
Description	With Fortum, Valmet Automation and VTT we contributed to the automation systems design and conceptualization for the future LHC system. I worked in the prosess information level analytic module using means-emds analysis, multilevel flow model and other related things.
Roles	Research Engineer - The work included modeling the system and representing the physical, functional and behavioral and goal oriented facets of it.
Skills	Agile Methodologies, Means-end analysis, Middleware, Simulation, Artificial Intelligence, Automation, Control engineering

Employment History

Telog Oy	**Project Manager**
19.11.2014 - 18.6.2015	The feasibility analysis of complex industrial processes requires static and dynamic simulation using as input the data representing the material resources used and the environmental conditions applying (the system is an open system). I had the opportunity to use many of my earlier experiences in the management of this project on behalf of the company participating in the development consortium.
AaltoUniversity School of Chemical Technology	**Researcher and Programmer**
1.3. - 31.12.2012	Prototype coding in C and Prolog. Providing technical assistance in the project and solving the problems in managing the search methods and machine learning techniques.
Aalto University School of Science and Technology	**Researcher/Researcher and Programmer/Researcher and Programmer/Teacher**
1.8.1998 - 31.5.2012	Action representation schemata, work flows, Prolog programming, search methods.

	• This project had a very well defined goal but considerably dynamic set of technical requirements and integration needs. The data model, the ontology and the terminological base with synonyms of varying formality formed levels of representation. • The project used meeting scheduling as a case for studying the behavior of dynamic queries and commitments. Prolog and C were used in the implementation. • I lectured AI course at university.
Fortum	**Project Manager / Research Engineer**
1.9.1990 - 30.11.1997	• First I collaborated in The AI part, then individually implemented the C version. In the later phases I managed the projecty.
CERN	**Research Engineer**
15.6.1994 - 31.7.1995	• The work included modeling the system and representing the physical, functional and behavioral and goal oriented facets of it.

List of Publications

Conceptual design and inductive learning of industrial processes, Conceptual design and inductive learning of industrial processes - metallurgical processes as a case Federated Computer Science Event 2012, Volume: Department of Computer Science Series of publications B, Report B-2012-1, 06/2012
Ontology-based Knowledge in Interactive Maintenance Guide, Ontology-based Knowledge in Interactive Maintenance Guide 40th Hawaii International International Conference on Systems Science (HICSS-40 2007), January 2007, 07/2007

References

Name	Title/Company	Contact Information	Comment
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Hobbies

Arts, reading, history, game sports