Profile

Naser is a senior software engineer with strong development skills who is able to work in complex and challenging IT environments. He is proactive, results-oriented, and eager to learn. He has already proved himself to be able to deal with complex projects; work in highly dynamic environments; and function effectively both as a team player and independently.

Born: *31-01-1976*; No work permit required; Education: *Ph.D. in computer science (topic: data integration)*; City: *Diemen*; E-mail: naser.ayat@gmail.com; mobile: *0683713363*

Naser Ayat

Senior software engineer

MOTIVATION

Naser works in IT industry since the completion of his study in Software Engineering. During this period, Naser has fulfilled various roles in many different projects. He has progressed to the role of a lead Java Developer after gaining ample experience as programmer, technical designer, and Analyst. Naser has been fulfilling this role now for many years.

Naser has a solid understanding of core computer science concepts such as data structures, algorithm analysis, concurrency, and distributed applications. He gained this understanding through his extensive software development experience, and teaching computer science courses.

Naser is a problem solver who is able to deal with complex problems in a systematic approach. He has mostly gained this knowledge and experience through his Ph.D. study and dealing with research problems.

In the last 10 years as an experienced software engineer, he has done various Java assignments in different industry sectors.

Naser has gained knowledge and experience in the Scala, Java, Spring, Spring Boot, JPA, Hibernate, Akka, Kafka, Relational databases, NoSQL data stores, REST, Web Services, API architecture principles, Microservices, GOF OOP design patterns, Test driven development, Docker, Kubernetes, Tomcat, Git, Maven, ScalaTest, Junit, Mockito, Cucumber, Agile/Scrum methodology, CI/CD, Prometheus, Grafana, Linux, shell scripting, encryption algorithms, and the analysis of the security risks of web applications.

Naser is able to effectively communicate with the development team, and the stakeholders. He is service-oriented in nature and because of his broad knowledge and experience, is able to understand & resolve problems quickly and realize useful alternatives.

Skills & Competencies

- Java SE/EE
- Scala
- Data Modelling
- Web Development
- Design Patterns
- Clean Coding
- Secure Coding
- Analytical Thinking
- Problem Solving
- Project Management
- Automated Testing
- Agile Software Development
- Continuous Delivery & Integration
- Code Quality Review

Career Summary

2018 till date	Rabobank
2015 till 2018	ING Nederland
2014 to 2015	Connectis
2009 to 2014	University of Amsterdam
2008 to 2009	Central Bank
2004 to 2008	Payam Noor University
2002 to 2004	Negareh
2001 to 2002	Ganjineh
1999 to 2001	IUST
1998 to 1999	Monenco
1997 to 1998	Tavanir

Career Overview

Nov 2018 – Present **Senior software engineer / Architect** **Rabobank / PCC**

The Performance Competence Center (PCC) is responsible for automating the performance test of Rabobank applications, and providing application performance consultancy to IT teams. To achieve its goal, PCC has developed the AutoLST (stands for Automated Load and Stress Test) application, which automates load and stress test of applications for IT teams. AutoLST receives some input parameters (such as the location of the test script, the servers that participate in the test, test duration, and test ramp time) from user; puts the load on the test servers; collects the log files and gathered metrics from test servers; analyses the collected files and metrics; and presents the report to the user. User can use the test report to get insight on how his developed application behaves under load. During this assignment, Naser participated in the following main activities:

- Migration of on-premise components of AutoLST to Azure, and setup related Azure DevOps pipelines
- Dockerizing AutoLST components
- Setup CI/CD pipelines for AutoLST components in Azure DevOps
- Development of JMeter test runs on premise
- Development of JMeter test runs on cloud by implementing a complex pipeline whose components are scattered among on-premise servers, and Azure cloud
- Integration of memory leak analysis and network analysis into the test pipeline
- Re-architecting AutoLST from scheduling based architecture to the event-driven architecture
- Development of test run monitoring
- Development of OpenID Connect for authenticating the users of AutoLST report browser using Azure AD
- Development of OAuth2 for authorization of AutoLST REST endpoints
- Maintenance of AutoLST including monitoring, bug fixing, and development of features

During these activities, he used the following technologies: Java 11, Spring Boot, Kafka, Azure, Azure Pipelines, Cosmos DB, Cloud Foundry API, Docker, Kubernetes, Elasticsearch, Bash, Angular, and Node.js.

Oct 2017 – Nov 2018 **Senior software engineer** **ING / Mortgages**

The Mortgagers tribe is responsible for doing the administration activities of ING mortgages within Netherlands. One of these activities is the adjustment of the regular interest rate of a mortgage, called RRA

(Regulaire Rente Aanpassen). Naser joined the *Boomerrang Vikings* squad, whose main responsibility is the development, and maintenance of RRA-related applications. During this assignment, he participated in the following main activities:

- Development of *Mortgage Penalty Correction* application (MOPECO). When a mortgage customer wants to do extra redemption on his mortgage or adjust the interest rate that he has already agreed with, he has to pay a penalty to the bank. Due to obscurity in AFM (The Netherlands Authority for the Financial Markets) guidelines, most banks calculated the penalty wrongly. The aim of the MOPECO project was to recalculate the penalties, and compensate for the affected customers. MOPECO involved extensive data extraction, cleaning, and transformation.
- Development of RRA front-end application in Polymer (in progress). The application shows a list of different interest rates and periods to the mortgage customer, and lets him to choose one.
- Development of RRA notification component, a Polymer web component for reminding the mortgage customers their RRA deadline in MING (mijn.ing.nl)
- Development of RRA-Reminder application, an application for notifying the mortgage customers about their RRA deadline (in progress)
- Maintenance of the *Mortgage Regular Interest Rate Adjustment API* application, the RRA backend
- Integration of mobile authorization into RRA front-end (written in Angular)

During these activities, he used the following technologies: Java, Spring, Angular, Polymer, Mocha, Chai, Sinon.JS, and Selenium.

Jul 2015 – Sep 2017 **Senior software engineer** **ING / Omnichannel**

Naser was assigned the development and maintenance of Interactive Voice Response (IVR) applications, which is one of the channels for interacting with the ING users. He participated in all phases of development of a new application in ING such as design, development, automated testing (e.g. functional, performance, resilience, disaster recovery), security code review, and deployment. More specifically, he participated in the following main activities:

- Development of *G39* application, which is used by ING customers for ordering envelopes by phone
- Development of *Saldolijn Solution Selling* backend, which is an application that enables ING back-office employees to manage telephone banking subscription for ING customers
- Development of *VbsAPI* application, which is the backend of ING telephone banking system

- Development of a secure authentication solution for different IVR applications
- Development of fraud detection for *VVA* application, the IVR application that is used by ING business customers to deposit money, already sent by envelop, into their account
- Different migration activities such as: IVR applications from WebSphere 7 to WebSphere 8.5 and tcServer 2.9; TIBCO queues; xPression; Stash to Gitlab; Nexus to Artifactory; Oracle database; tcServer 2.9 to 3.1; and Kibana
- Adding monitoring to IVR applications
- Maintenance of IVR applications (adding features, bug and vulnerability fixes, operations)
- Security code review as Security Satellite (determine false-positives and fixing real issues)
- Code quality review and improving the quality of IVR applications

During these activities, he used the following technologies: WebSphere, tcServer, Spring, Java, Scala, Akka, Kafka, Tibco, IFSA, XFB, Logstash, Kibana, Grafana, and Fortify.

Apr 2015 - May 2015 **Senior software engineer** **Connectis / CTAS**

eHerkenning is a platform that enables Dutch companies to identify themselves to online governmental services. In this platform, a number of web services (called provider) from different vendors collaborate together to provide identity management services to Dutch companies. Chain Tests are a number of tests that assure these providers can successfully interact with each other. As a vendor in the eHerkenning platform, Connectis must perform chain tests before each software release. The manual performance of chain tests is a costly and error-prone process. Chain Tests Automation System (CTAS) is a system that aims at automating chain tests in order to avoid the cost and errors of the manual performance.

Naser was assigned the task of realization of the CTAS. He was responsible for the design, and development of the whole system. The system was implemented using Java, Scala, Selenium WebDriver, Junit, Guice, etc.

Jul 2014 - Mar 2015 **Senior software engineer** **Connectis / CMS**

Connectis provides identity management services, to a large number of companies in Netherlands. These companies need to dynamically configure the provided identity management service based on their changing needs. For instance, Kluwer, which is a company that provides access to legal documents to its customers, needs to connect new clients to its system; revoke access from the clients whose subscription has ended; and change the level of authentication for some specific clients. The main aim of the Configuration Management System (CMS) is to address these needs without human intervention.

A team of developers consisting Naser was assigned the task of realization of the Configuration Management System. Naser was initially responsible to extract the requirements from stakeholders, and document them as use-case descriptions. In the design phase, he was responsible for designing the architecture, rest web services, and the data model of the system. Moreover, he implemented the majority (about 70%) of the backend of the system including the database, DAO, controller, and the rest web services layers, and developing the integration tests. He also was responsible for the threat risk modeling of the system to assure that the system is not vulnerable to security attacks. The following technologies were used in implementing the system: Java, Scala, Jersey, Hibernate, Guice, XML, JAXB, JSON, PostgreSQL, H2, Junit, Mockito, XMLUnit, JerseyTest, etc.

Jul 2013 - Jun 2014 **Senior Java developer** **UvA / PPDP**

The aim in the Privacy Preserving Data Publishing (PPDP) is to provide a framework for sharing data about individuals without compromising their privacy.

Naser was assigned the task of realization of the framework by implementing different novel and existing data anonymization algorithms. The system was implemented using Java, Tomcat, Servlet, JSP, Jersey, Guice, Hibernate, MySQL, etc.

Sep 2009 - Jun 2013 **Senior Java developer / Ph.D. researcher** **UvA / ERPD**

The topic of Naser's Ph.D. was Entity Resolution in Probabilistic Data (ERPD), where the aim is to find, and merge the entities in the database that use different notations to refer to the same real-world object to improve the business intelligence query results.

During his Ph.D. research, Naser implemented a number of systems to experimentally validate the performance of his novel developed methods. He used the following technologies in implementing these systems: Java, MapReduce, Hadoop, Lucene, Weka, Servlet, Jersey, Guice, Junit, Mockito, Hibernate, etc.

Aug 2008 - Aug 2009 **Team Lead / Senior Java developer** **Central Bank / BDI**

The aim of the Banking Data Integration (BDI) project is to implement a business intelligence system for banking data of all of the banks all over the country.

As the technical team leader, Naser was responsible for successful implementation of the inception phase. He, together with the team members, extracted the high level requirements of the system; designed the system architecture; benchmarked different solutions; built a proof-of-concept prototype; and provided an estimated plan for the next steps of the project. An important aspect of this project was coordination and direct contact with different stakeholders ranging from top level managers to technical employees. In this project, he used Java, MS SQL Server, UML, Hibernate, XML, XSLT, etc.

Jun 2007 - Jul 2008 **Team Lead / Senior software developer** **Payam Noor University / SAS**

Payam Noor University is a distance education university with 300,000+ students all over the country. This university has 1,000,000+ applicants each year. The Student Admission System (SAS) is a web-based system that automates the admission process.

As the technical team leader, Naser was responsible for the realization of the system from founding the project through launching the system. After recruiting the development team, he extracted the system requirements and document them as use-case descriptions; and designed the data model. He also developed about 30% of the backend of the system including the database, DAO layer, and the majority of the user input validation sub-system. The system was implemented using ASP.Net, Ajax, C#, NHibernate, MS SQL Server, UML, etc.

May 2006 - May 2007 **Team Lead / Senior software developer** **Payam Noor University / EGS**

In Payam Noor University, all of the students of that take a course in a semester must take the same exam at the same time. As a result, a new exam should be designed for all of the courses in each semester. This process is very costly, error-prone, and time consuming. The aim of the Exam Generation System (EGS) is to deal with these problems by automatically generating new exams from a gathered question bank.

As the technical team leader, Naser was responsible for the realization of the EGS system. In this project, he led the development team, and designed the architecture of the system. He also developed the question extraction sub-system (for extracting questions from existing exam files), and feedback sub-system (for adjusting the question features using the exam results). The system was implemented using ASP.Net, C#, XML, Open XML, iTextSharp, NHibernate, MySQL, UML, etc.

Mar 2005 - Apr 2006 **Team Lead / Senior software developer** **Payam Noor University / SGS**

The Statistics Gathering System (SGS) aims at gathering up-to-date data from all of the university branches all over the country, and generating managerial reports for the university's board of directors.

As the technical team leader, Naser was responsible for the realization of the EGS system. Moreover, he developed all of the backend of this system except the report generator sub-system. The system was implemented using ASP.Net, C#, MySQL, ADO.Net, etc.

Sep 2004 - Feb 2005 **Team Lead / Senior software developer** **Payam Noor University / UIAS**

The Uniform Information Access System (UIAS) aims at implementing a business intelligence system that extracts up-to-date data, which is stored in a number of the operational systems in the Payam Noor University, and provides a uniform querying interface over them.

As the technical team leader, Naser was responsible for the realization of the UIAS system. In this project, he recruited the team; and designed the architecture of the system. Moreover, he provided solution for a number data integration challenges in the project. He also developed the data

migration part of the system. The system was implemented using Java, JAXB, XML, XSLT, Hibernate, MS SQL Server, etc.

Jul 2002 - Aug 2004 **Senior Software Designer / Developer** **Negareh / NegAb**

NegAb is a GIS-based system for recording accidents in urban water facilities, and helping in dealing with them. This system helps the water distribution companies to better deal with the accidents in urban water facilities.

A team of developers consisting Naser was assigned the task of realization of this System. He provided a detailed design of the system, and documented it using the UML notation. Moreover, he developed DAO, and controller layers. After deployment of the system, he was assigned the task of bug fixing, and extending the system by adding new requested features. The system was implemented using ASP.Net, C#, ArcGIS, MS SQL Server, RUP, UML, etc.

Dec 2001 - Jun 2002 **Software Analyst** **Ganjineh / EMS**

The Education Management System (EMS) is a software package for automating the tasks of (such as course registration, recording the grades, etc.) educational institutions.

As the team leader of the analysis team, Naser was responsible for extracting and documenting the requirements of this system. He extracted the requirements through interviewing the stakeholders, and documented the requirements as use-case descriptions, and other UML constructs (such as activity, and sequence diagrams). In this project, he used RUP, UML, Rational XDE, etc.

Jan 2001 - Nov 2001 **Software Designer** **Ganjineh / PMS**

The Procurement Management System (PMS) aims at recording the procurement process for a company in Tehran.

Naser was assigned the task of designing this system. He designed this system, and documented the design using the UML notation. He also led the development team. In this project, he used RUP, UML, Rational Rose, etc.

Feb 1999 - Apr 1999 **Software Developer** **Monenco / TS**

The Timesheet System (TS) aims at keeping track of working hours that employees spend on different projects.

Naser was assigned the task of realizing this system. He developed the whole system, and deployed it on company's local intranet. The system was implemented Visual Basic, MS SQL Server, etc.

Sep 1998 - Jan 1999 **Software Developer** **Monenco / OTS**

The Office Automation System (TS) aims at electronic exchange of the company's correspondences.

Naser was assigned to the OTS project. He developed parts of this system. The system was implemented using Visual Basic, MS SQL Server, etc.

Sep 1997 - Aug 1998 **Software Developer** **Tavanir / Intranet**

Tavanir's intranet is a local web site for sharing information and news with employees.

Naser was assigned to the Intranet project. He developed parts of the intranet using ASP, Dynamic HTML, VBScript, etc. He also added the search facility to the website by deploying MS Index Server.

Education

- Ph.D., Computer Science, University of Amsterdam, 2014
- M.Sc., Software Engineering, University of Science and Technology, 2001
- B.Sc., Software Engineering, Sharif University of Technology, 1997

Professional Trainings

- Rational Unified Process, Self-study, 2001
- Leadership and Management, Industrial Management Institute, 2005
- Clean Coding, Self-study, 2013
- Scrum Master Training, Self-study, 2014
- Functional Programming Principles in Scala, Coursera, 2014
- Principles of Reactive Programming, Coursera, 2014
- Secure Coding, Security Academy, 2015
- Cryptography, Coursera, 2014

Publications

- N. Ayat, M. Mandjes, H. Afsarmanesh, G. van't Noordende, “Query Log Publication via Differential Privacy”, Submitted to Information Systems Journal (in the review process), 2015
- N. Ayat, R. Akbarinia, H. Afsarmanesh, P. Valduriez, “Entity Resolution for Uncertain Data Using Entropy Reduction”, Submitted to Information Systems Journal (in the review process), 2015
- N. Ayat, R. Akbarinia, H. Afsarmanesh, P. Valduriez, “Entity Resolution for Probabilistic Data”, Information Sciences Journal, 2014
- N. Ayat, R. Akbarinia, H. Afsarmanesh, P. Valduriez, “Entity Resolution for Distributed Probabilistic Data”, DAPD journal, 2013
- N. Ayat, R. Akbarinia, H. Afsarmanesh, P. Valduriez, “Entity Resolution for Uncertain Data”, BDA, 2012
- N. Ayat, H. Afsarmanesh, R. Akbarinia, P. Valduriez, “An Uncertain Data Integration System”, ODBASE 2012
- N. Ayat, H. Afsarmanesh, R. Akbarinia, P. Valduriez, “Pay-As-You-Go Data Integration Using Functional Dependencies”, CD-ARES, 2012
- N. Ayat, R. Akbarinia, H. Afsarmanesh, P. Valduriez, “Distributed Uncertain Entity Resolution”, DBDBD, 2012

- N. Ayat, M. Sharifi, “Justifications for the Deployment of XML/EDI for Development of Electronic Commerce Applications”, Allied Academies International Conference on E-Activities, Las Vegas, USA, October 2003 (Distinguished Research Award)
- N. Ayat, M. Sharifi, N. Asgary, “An Overview of Competing Methods for Involving Small to Medium Enterprises in EDI”, The World Internet & Electronic Cities Conference, Kish Island, May 2001.
- N. Ayat, M. Sharifi, “Obstacles in the Way of Electronic Money Deployment in Electronic Banking and Commerce”, the 1st International Electronic Banking Conference, Export Development Bank, Tehran, September 2000.
- M. Sharifi, N. Ayat, “Distributed Integration: A Replacement for Data Warehousing in Electronic Banking”, The 1st International Electronic Banking Conference, Export Development Bank, Tehran, September 2000.
- M. Rahmani, N. Ayat, “A New Data Driven Method for Robust Speech Recognition”, WSEAS Transactions on Information Science and Applications, Issue 6, Volume 1, December 2004.
- K. Mahdian, N. Ayat, M. Sharifi, "Proposing an Agent-based Architecture for Distance Collaborative Learning", Technical report.

IT Knowledge

Knowledge area	Experience
Java/ J2EE	> 10 yrs.
Scala	> 2 yrs.
Management	> 8 Yrs.
System development	> 20 yrs.
Databases, Database Design	> 20 yrs.

Languages

English	Fluent
Dutch	Intermediate

Methodologies

- Scrum, Kanban, RUP

Architecture

- Multitier Client/Server, Application Servers, Enterprise Application Integration, Middleware, Business Process Management (BPM), workflow, Web technology, SOA, RESTful, Microservices

Design

- Object Oriented Design, Design Patterns, UML

Coding Principles

- Clean Coding, Secure Coding, TDD

Databases

- Oracle, MySQL, MS SQL Server, PostgreSQL, H2, NoSQL (Cassandra, neo4j, Elasticsearch)

Frameworks

- Spring, Spring Boot, Hibernate, Jersey, Guice, Akka

Build Management

- Maven, Nolio, Jenkins, Gitlab, Artifactory, Azure DevOps

Test

- Junit, Mockito, WireMock, ScalaTest, XMLUnit, JerseyTest, Unitils, Cucumber

Application Server

- Apache Tomcat, tc Server, Internet Information Server (IIS)

Programming Languages

- Scala, Java SE/EE (Servlets, JSP, JAX-WS / JAX-RS / JAX-RPC, JAXB, JDBC, JPA), C, C++, C#, Visual Basic, Pascal, ASP, ASP.Net

Front-end web development

- JavaScript, Typescript, HTML, CSS, Angular, Polymer, Mocha, Chai, Jasmine, Sinon.JS, and Selenium

Operating Systems

- Linux, Virtual servers, Windows, Dos, VMS

Tools

- Intellij Idea, Eclipse, JIRA, Service-now, Crucible, SonarQube, Jenkins, Rational Rose/XDE, LaTeX, TikZ, MS Office, Mercurial, Git, Fortify

Other

- Docker, Kubernetes, Azure, Azure CLI, Azure Pipelines, Cloud Foundry API, Kafka, Hadoop, Spark, Flink, Concurrent programming, Threat Risk Modeling (STRIDE), Machine Learning, SQL, XML/ XSLT/ XPath, MapReduce, Lucene, Weka, MATLAB