

NANDISH B S

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Sex Male | Date of birth 21 May 1994 | Nationality Indian



Study program

Masters in Digital Engineering

Work Experience

19 Dec 2016–19 Jul 2019

Software Developer

SIEMENS Technology and Services Private Ltd
84, Keonics Electronics City, Bengaluru(India)

Grades

- **Information retrieval** - 2.3
- **Machine learning** - 3.0

Training

- **Compilers and Language Design** Training from RPS consulting in Siemens.
- **iOS & Mac OSX** Development Training at Micro Academy India Pvt Ltd.

SKILL SET

- **Languages**
 - Professional Proficient Languages: C#, Octave, SQL
 - Projects done using Languages: Swift, Java, MATLAB, Python
 - Familiar Languages: Objective C, HTML, C++
- **On Job Experience** : Command Pattern, Compiler, ANTLR grammar and Parser.
- **Development Environment**: TFS-Team Foundation Server, NCover, Dot Trace, ReSharper, FxCop, SVN-Subversion Revision Control, Git
- **Unit Testing**: NUnit testing framework, Rhino mock unit testing framework
- **Windows Technologies**: Dot Net Framework.WPF, WinForms, MVVM
- Familiar in programming Arduino Uno, 8051 MicroController and 8086 Microprocessor

CERTIFICATIONS

- Introduction to **Machine Learning**, by Andrew Ng from Stanford University.

PROJECTS

Totally Integrated Automation (TIA) Portal, provides an engineering framework for implementing automation solutions in all industries around the globe. From designing, commissioning, operating and maintaining to upgrading automation systems, TIA Portal saves engineering time, cost, and effort. I am part of SIMATIC STEP 7 in the TIA Portal which is a software for the configuration, programming, testing, and diagnosis of all SIMATIC controllers.

RESPONSIBILITIES

- Working in Agile methodology with the intent of continuous integration and continuous delivery.
- Analyze customer requirements and take ownership of the user story delivery. Developing spikes to realize bigger requirements to get early feasibility feedback.
- Clean code, design principles and paradigms are the basis of our working model. Modern software development practices like TDD and extreme programming are followed.

HIGHLIGHTS ON WORKED ON TOPICS IN SIEMENS

1. Program Units (Fig 1)

- Latest deliverable for TIA 15.1 release to perform segmentation of the project. This makes the online teamwork easier, once each programmer could work online in a unit without disturbing other colleagues' work.
- Design & development of access modifier for a block within a unit and providing the user interface to enable the functionality was my contribution in the Unit's delivery.
- Integration of Unit to various sub-systems of TIA like Inputs/Outputs, Technological Objects, Safety blocks, download and upload was another area where I participated.

2. Textual Interface Editor (Fig 2)

It is a free flow programming language for SCL editor. I contributed in the bug fixing phase and redesigned some of the components in it where the number of reported bugs were more.

3. Notification within STEP 7

With the intent to modularize STEP 7 and making it more flexible to introduce new functionality evaluated the notifications within a sub-system and across the sub-systems. My proposals were deeply appreciated and the same was implemented. This gives insights into developing a broker and publisher/subscriber-based notification system, which is enough loosely coupled to get it extended in the future.

4. Innovation Sprint: SCL Duplicate code detection (Fig 2)

When a code with a software vulnerability is copied, the vulnerability may continue to exist in the copied code. It increases compilation time, coupling, Cyclomatic Complexity. Using one of the string evaluation algorithms, common code patterns will be identified. Using the power of Lucene library the patterns are mapped and Lucene search concepts will be mapped with comparison algorithm syntax for fast retrieval and performance.

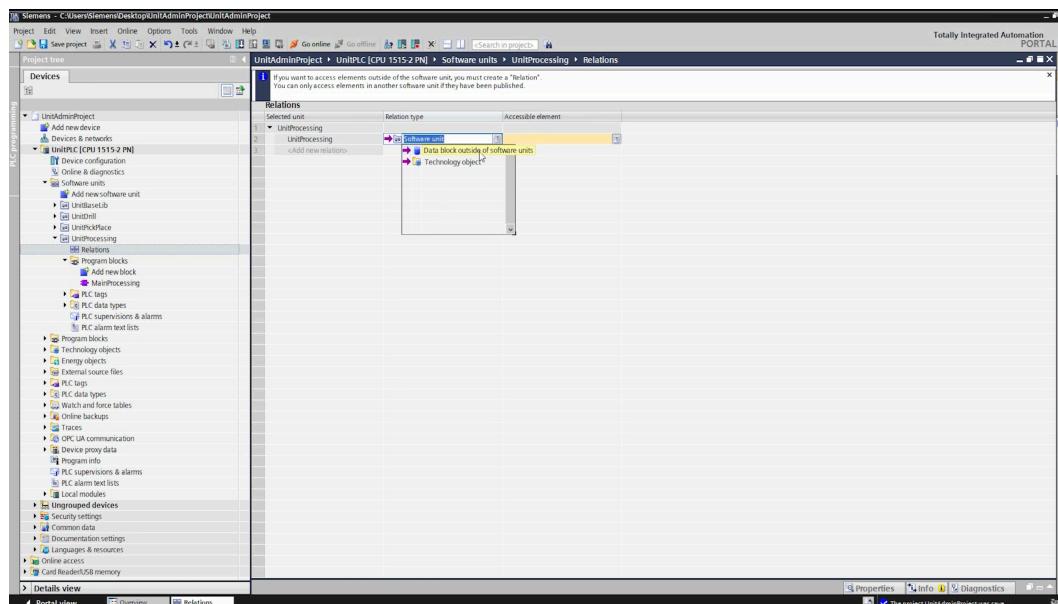


Fig 1

Source: <https://new.siemens.com/global/de/produkte/automatisierung/industrie-software/automatisierungs-software/tia-portal.html>

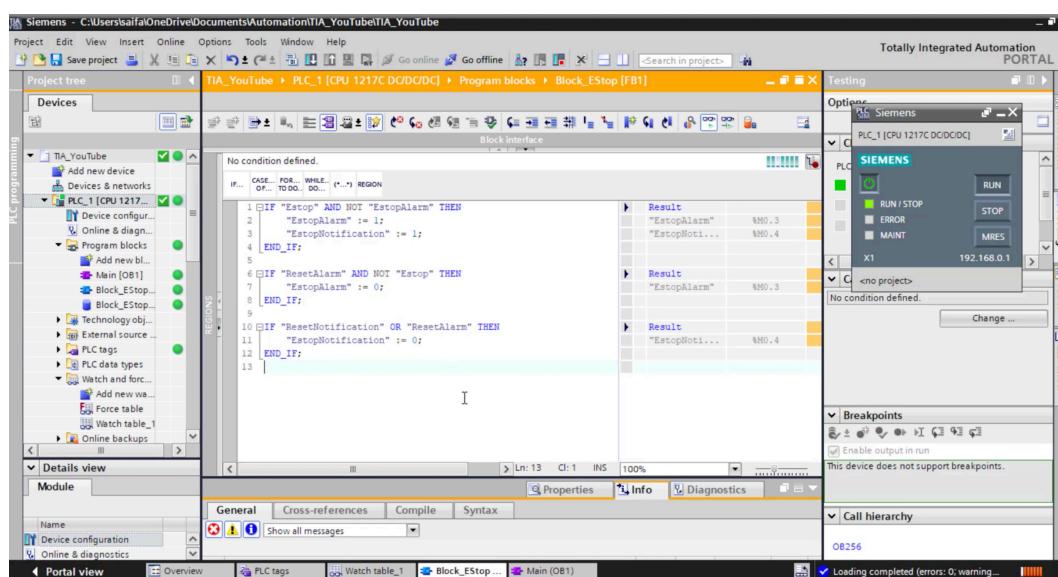


Fig 2