



POLITECNICO
MILANO 1863

Software Engineering 2

Requirements Analysis and Specification Document

Students & Companies

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1 Introduction

1.1 Purpose

The purpose of S&C is to provide a platform that facilitates the internship matching process between university students and companies. The platform will streamline the process by leveraging students' skills, experiences, and attitudes and aligning them with companies' internship offers. It will also assist in the selection, feedback, and monitoring processes for all stakeholders involved.

1.1.1 Goals

ID	Description
G1	Allows Companies to advertise their internship offers to find the most suitable students
G2	Allows Students to look for internships based on their needs
G3	Allows Students to be recommended to companies using keyword-based and statistical matching
G4	Allows Students to be notified when a new internship offer is published
G5	Supports selection process by helping manage interviews and also finalize the selections
G6	Provides suggestions to companies regarding how to make their offers more appealing for students
G7	Provides suggestions to students how to make their CVs more appealing for companies
G8	Allows stakeholders to monitor the progress of internships, report issues, and track outcomes
G9	Allows Universities to monitor the situation of ongoing internships and interrupt them when necessary

1.2 Scope

1.2.1 World Phenomena

ID	Description
WP1	Students create and upload their CVs, reflecting their real-world skills and experiences
WP2	Organizations define and submit their internship requirements and benefits
WP3	Students decide to accept or reject recommendations based on their preferences
WP4	Companies decide to accept or reject recommendations based on their preferences
WP5	Companies conduct interviews and evaluate candidates directly
WP6	Internships proceed in the real world, with students working on projects as described by the companies
WP7	Stakeholders (students, companies, universities) identify issues during internships and report them to the appropriate parties.

1.2.2 Shared Phenomena

ID	Description
SP1	The system extracts relevant information (skills, preferences) from student CVs
SP2	Companies create and manage internship postings through the platform interface
SP3	The system provides personalized recommendations for internships to students
SP4	The system provides personalized recommendations for candidates to companies
SP5	The platform supports companies by organizing interviews and collecting structured questionnaire responses
SP6	The system offers personalized suggestions for improving CVs to students
SP7	The system offers personalized suggestions for improving job postings to companies
SP8	The platform enables users to submit and manage complaints, facilitating resolution with relevant stakeholders.

1.3 Definitions, Acronyms, Abbreviations

Acronyms	Definitions
RASD	Requirements Analysis and Specification Document
S&C	Students&Companies
CV	Curriculum Vitae

1.4 Revision history

- Version 1.0 - 22/12/2024

1.5 Reference Documents

- Assignment document
- CreatingRASD (lecture slides)

1.6 Document Structure

- **Introduction:** A general introduction to the goals, the phenomena and the scope of the system-to-be. It aims at giving general but exhaustive information about what this document is going to explain.
- **Overall Description:** A general description of the product to be and its requirements. This section provides information that is explained in detail in Section 3.
- **Specific Requirements:** All software requirements are explained using scenarios, use-case diagrams and activity diagrams. Non-functional and functional requirements are also mentioned
- **Formal Analysis Using Alloy:** This section includes Alloy code that describes the model and shows its soundness and correctness.
- **Effort Spent:** Effort spent by all team members shown as the list of all the activities done during the realization of this document
- **References:** References to documents that this project was developed upon.

2 Overall Description

2.1 Product Perspective

2.1.1 Scenarios

2.1.2 Class Diagrams

2.1.3 State Diagrams

Figure 1

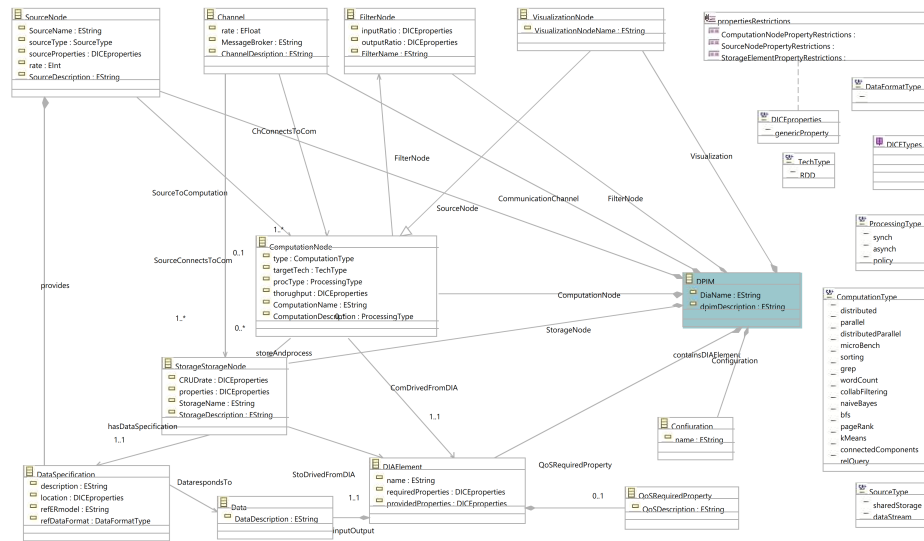


Figure 1: High-level Class Diagram

2.2 Product Functions

2.3 User characteristics

2.4 Assumptions, dependencies and constraints

2.4.1 Domain Assumptions

ID	Description
D1	Internship descriptions are comprehensive and reliable
D2	CVs accurately reflect students' skills and experiences
D3	Universities actively oversee internships and intervene when necessary
D4	Companies manage interview timelines and conduct them professionally
D5	Users provide meaningful feedback to improve the system
D6	Problems are reported in a timely manner by all parties
D7	The platform supports high user traffic without performance issues

3 Specific Requirements

3.1 External Interface Requirements

3.1.1 User interfaces

3.1.2 Hardware interfaces

3.1.3 Software interfaces

3.1.4 Communication interfaces

3.2 Functional requirements

3.2.1 Requirements

3.2.2 Use case diagrams

3.2.3 Use case

3.2.4 Mapping on goals

4 Formal Analysis Using Alloy

5 Effort Spent

Belfiore Mattia	
Section	Effort (hours)
Introduction	-
Overall Description	-
Specific Requirements	-
Formal Analysis	-
Total	-

Benedetti Gabriele	
Section	Effort (hours)
Introduction	5
Overall Description	-
Specific Requirements	-
Formal Analysis	-
Total	5

Buccheri Giuseppe	
Section	Effort (hours)
Introduction	4
Overall Description	-
Specific Requirements	-
Formal Analysis	-
Total	4

6 References

6.1 References

6.2 Used Tools