



SUMMER INTERNSHIP RECOGNOS Romania

RECOGNOS Romania (www.recognos.ro)

- Romanian-American joint venture
- Microsoft Certified Partner (Business Intelligence), Custom Development Solutions
- ISO 9001:2008 certified
- Two major practice areas:
 - Custom System Development for Banking, Investments, Insurance, Finance, Retail, etc. with expertise areas in:
 - **Semantic WEB Applications**
 - **Investments & Banking**
 - **WEB 2.0 Internet Applications, Marketing Collateral**
 - Incubator for new systems and services (IP creator)
- Partnering with vertical knowledge experts in developing Internet based new products and services

The Internship opportunity is open for the students of the Faculty of Mathematics and Computer Science of the Babes-Bolyai University Cluj-Napoca / Faculty of Automation & Computer Science of the Technical University Cluj-Napoca and comprises the following subjects:

No	Theme	Description	Minimal required skills
			Technologies / Environments that will be approached
1	Distributed Enterprise Applications Architectures (DEAA)	<p>Design and implementation solutions for creating Distributed Architectures.</p> <ul style="list-style-type: none"> • Distributed - Design independent components that can scale to enterprise requirements • Modular - Design and implement the required functionality as self contained modules • Transactional - Ensure the atomicity of the operations in the distributed environment • Fail Safe - Design the system to continue working even in situations where components fail or are not available for periods of time • Scalable - Provide ability to easily handle increasing loads on the system just by adding more hardware • Secure - Handle unified authentication and resource access authorization across the distributed system • Messaging Communication - Use messaging bus to provide reliable one-way non blocking communication. 	<p>Object oriented development using modern approaches like DDD or TDD and agile methods, with common best practices for solving implementation problems and details.</p> <p>Microsoft .NET Framework – Main platform for developing the system NServiceBus – used as a mature, open-source implementation for a service bus. MSMQ – used as a messaging backend for NServiceBus NHibernate – open-source object-relational mapped for cross-database persistence WCF – framework for creating border services and for handling RPC scenarios LINQ – framework for expressing queries on various resources in the system Microsoft SQL Server – concrete database backend WPF, ASP.NET MVC2, Silverlight, Rhino Mocks</p>
2	Inventory Management System (IMS)	<p>Manage a list of inventory items and generate bar code labels for them. Make inventories using a bar code scanner. The application should be able to generate reports using the defined inventories.</p>	<p>Object oriented development using modern approaches like DDD or TDD and agile methods, with common best practices for solving implementation problems and details.</p> <p>Microsoft .NET Framework – Main platform for developing the system WCF – framework for creating border services and for handling RPC scenarios LINQ – framework for expressing queries on various resources in the system Microsoft SQL Server – concrete database backend WPF, ASP.NET MVC2, Silverlight, Rhino Mocks.</p>
3	E-Greetings (EG)	<p>E-greetings is a website where a user chooses from an on-line catalog of e-cards made available on the web site. After selecting a card, the sender can personalize it to various degrees by adding a message, photo, or video. Finally the sender specifies the recipient's e-mail address and the web site delivers an e-mail message on behalf of the sender to the recipient. An e-card is similar to a postcard or greeting card; with the primary difference being it is created using digital media instead of paper or other traditional materials.</p>	<p>Object oriented development using modern approaches like DDD or TDD and agile methods, with common best practices for solving implementation problems and details.</p> <p>Microsoft .NET Framework – Main platform for developing the system WCF – framework for creating border services and for handling RPC scenarios LINQ – framework for expressing queries on various resources in the system Microsoft SQL Server – concrete database backend ASP.NET MVC2, Silverlight, Rhino Mocks.</p>
4	Machine learning in text mining	<p>Domain: Artificial Intelligence, Semantic WEB Study and implement algorithms that allow the automated recognition of document types based on machine learning. These solutions will allow to create a document classifier that is trained by processing documents with a known content.</p>	<p>Java Strong in Mathematics Artificial Intelligence (Machine learning) Semantic web</p>
5	Automatic generation of text mining 4GL	<p>Create a software service that will allow the automatic creation of COGITO 4GL code that allows the automatic processing of a natural language document. The software will process an ontology represented in OWL and will extract the parsing taxonomy and 4 GL code used to extract information from a document.</p>	<p>Java Web services NLPC Natural Language(Language Processing) Ontology (OWL) Text mining</p>
6	Development of a parser agent for text mining	<p>Create a text parser that will be used to extract information from a semi formatted document. The parse is using an algorithm for each field that will be extracted, that is used to extract data using regular expressions.</p>	<p>Java regular expressions (RegEX)</p>
7	Ontology Population from text documents	<p>Ontology is a formal method of describing the concepts and relations between concepts in a domain. Starting from the domain description (an existing ontology) ontology population is the task of identifying which concepts and relations are present in text documents.</p>	<p>Java Ontology Mathematical background.</p>
8	Insurance policies	<p>Create a web application that allows the issuance of insurance policies. The application will use a SQL database for storing users and customers data. The modules below are mandatory:</p> <ul style="list-style-type: none"> - logging module - module used to populate insurance policies templates with customers data - conversion module of policy templates from .doc format to .PDF format. 	<p>Microsoft Visual Studio .NET 2005 - ASP.NET; SQL Server 2005. Microsoft Office OOP</p>

Internship Duration: 90 hours UBB, 240 hours UT **during 5/07/2010-8/25/2010**

Registration Term: To apply (date limit): 04/10/2010

Send e-mail (subject: UBB Internship_2010 or UT Internship_2010) at jobs@recognos.ro, including:

CV, personal contact information, the theme you want to apply for

Selection Interview: 04/12/2010 - 05/10/2010

Announcement of accepted students: 05/10/2010