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| Pegasus%20-%20Black%20on%20White | | | | Department of Electrical Engineering & Computer Science, CS Division  College of Engineering & Computer Science  University of Central Florida | | | | | | |
| *Return Form to*: Dr. Mark Heinrich, heinrich@cs.ucf.edu | | | | | | |
| **COP 4934: Computer Science Senior Design** | | | | | | |
| **Proposed Project Description Form\*** | | | | | | | | | | |
| (Sponsors who are willing and able are asked to provide a Team Donation of $1500 or more for supplies and the running of the CS Senior Design Program) | | | | | | | | | | |
| Will support: X Cannot support: | | | | | | | | | | |
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| Sponsoring Organization: | | | | | | Altra Systems, Inc. | | | | |
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| Mailing Address: | | | 3251 Progress dr. Suite A. Orlando, FL 32826 | | | | | | | |
|  | | | | | | | | | | |
| Project Contact: | | Armando Di Francesco | | | | | | Position: | | Technical Manager |
|  | | | | | | | | | | |
| Contact Phone: | 407.409.1056 | | | | | | Fax: | |  | |
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| Contact E-mail: | a.difrancesco@altrasystems.com | | | | | | | | | |
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| Project Title *(working)*: | | | | | Automatic Dashboard Generator | | | | | |

*Please feel free to use as much space as needed for each of the sections below.*

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| **Background of Company/Organization**  (Provide a brief overview of the company/organization and the specific project location here) |
| Altra Systems is an engineering solutions provider, specializing in industrial automation. We provide solutions for customers from both private and public sectors which use sequential industrial processes. Our software dramatically simplifies the creation and maintenance of production recipes and therefore reduces the need for training of operating personnel. |
| **Statement and Scope of the Problem(s)**  (Provide the problem statement here; Please be as specific as possible to help us understand the scope of the problem, and thus the scope of the project, specifically the design content) |
| Dashboards are a useful tool in manufacturing. They can display the right information presented in the right way to every level of the organization while reducing the time spent creating and distributing reports.  They are a good solution, but still need design and programming to create and keep them running. If some changes or additions are necessary, it will be necessary to get time of programmers or IT resources involved.  Our proposed solution is an automatic dashboard generator that gets process data from a database, and depending on settings will display customized sets of data to specific users. The elements to be displayed for each user will be defined by himself or the system administrator, but no programming will be necessary to make any changes. The dashboards will be presented via a web server and presented in an app for tablets and a web site. |
| **Overall Project Goal(s)**  (Describe the overall goals of the project in this space) |
| Design and development of all the components necessary for a functional system generating automatically user or group customized dashboards displaying process data extracted from a SQL Server database.  Documenting all the stages of design and development. |
| **Project Objectives**  (Enter the project objectives that will help achieve the goals of the project; Please be as specific as possible) |
| * Design of the database structure. * Design and development of the web server application. * Design and development of an android client app. * Design and development of an iOS client app. * Design and development of a web site for accessing the data. * Documentation of all the stages of the development. |
| **Expected Project Deliverables**  (Enter the expected project deliverables including, if possible, proposed project tasks; Please be as specific as possible) |
| * Database with all its tables, derivative tables, stored procedures and triggers. * Web server specifications with its configuration documented. * Functional Android app with source code and documentation. * Functional iOS app with source code and documentation. * Functional web client with source code and documentation. * General system documentation. |
| **Desired Core Competencies and Experience of Team**  (Please list the desired competencies/experience/knowledge needed by the project team members that you feel will facilitate successful project execution; Examples: specific programming language experience, familiarity or expertise in certain web technologies, databases, mobile SDKs, prior classes in certain subject areas, a love of computational complexity and efficient algorithms etc.) |
| SQL Server database.  Web server with database connectivity.  Android apps.  iOS apps.  General web design  Database connectivity via web |
| **Other Special Considerations and Project Requirements**  (Please provide any special circumstances, constraints, and requirements needed by the project team members; **Examples**:   * University participants must be US Citizens or Permanent Residents, * All work is to be performed off-campus at a specific site, * *Interdisciplinary project*: You would like to see CS students teamed with engineering students from one or more of: Computer Engineering, Electrical Engineering, Mechanical Engineering, Industrial Engineering, Civil and Environmental Engineering (please specify) * All team members and the professor must submit to background checks, * All team members and the professor must sign non-disclosure agreements |
| No special requirements apart from a non-disclosure agreement for the team members. |
| **Project Mentor(s), if different than who is listed above**  (Please provide the contact information and title/position for the project mentor(s), who will advise the student team) |
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*\*IMPORTANT NOTE: Proposed projects may not be chosen by student groups. In any one semester the number of potential industry-sponsored, faculty-proposed, or student-funded projects may exceed the number of student teams. If this project proposal is approved by Dr. Heinrich as a potential CS Senior Design project, you or an appropriate representative will be asked to come to class and give a 15-minute project pitch to the students. Keep in mind this is your chance to convince the students why they should pick your proposed project. Think about what is in it for them, what technologies they will get exposed to, what are the broader, enduring, and social impacts of the work, etc. If your project is chosen, you will be notified typically by the 4th week of the semester. If your project is not chosen, you will be notified in the same timeframe and if it makes sense for your timeline, we would love to offer the same project in the next semester.*