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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: Cannot support: | | | | | | | | | | |
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| Sponsoring Organization: | | | | | |  | | | | |
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| Mailing Address: | | |  | | | | | | | |
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| Project Contact: | | Dr. Pawel M. Wocjan | | | | | | Position: | | Associate Professor |
|  | | | | | | | | | | |
| Contact Phone: |  | | | | | | Fax: | |  | |
|  | | | | | | | | | | |
| Contact E-mail: | wocjan@eecs.ucf.edu | | | | | | | | | |
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| Project Title *(working)*: | | | | | Automatic grading system for programming assignments | | | | | |

*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) |
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| **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) |
| The CS Division does not have a system for automatically grading programming assignments. Currently, the programming assignments are submitted by the students on Webcourses, but the teaching assistants still have to download the assignments onto their computers and run the programs manually. Often, the students have to wait a week or longer to receive feedback.  This is in contrast to the MOOC platforms such as Coursera, EdX, and Udacity that enable students to submit their programs and obtain detailed feedback on the performance and correctness of solutions in a short time. |
| **Overall Project Goal(s)**  (Describe the overall goals of the project in this space) |
| The goal of this senior design project is to realize a system for automatically grading programming assignments. In the ideal case, the prototype should be tested in the large undergraduate classes such as Intro to Programming, CS1 and CS2. |
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| **Project Objectives**  (Enter the project objectives that will help achieve the goals of the project; Please be as specific as possible) |
| Building upon their own experience in taking the programming classes in the CS program at UCF, the students should design an automatic grading system for the programming assignments. |
| **Expected Project Deliverables**  (Enter the expected project deliverables including, if possible, proposed project tasks; Please be as specific as possible) |
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| **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.) |
| Web design (HTML, CSS, JavaScript)  Databases (SQL or MongoDB)  Servers  Linux |
| **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 |
|  |
| **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.*