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SOFTWARE PLAN

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DEPARTMENT OF COMPUTER SCIENCE

SEPTEMBER 20, 2014

TABLE OF CONTENTS

1. System Definition

1.1 Problem Definition	3
1.2 System Justification	3
1.3 Goals for the System and Project	3
1.4 Constraints on the System and Project	3
1.5 Functions to be Provided	4
1.6 User Characteristics	4
1.7 Environment	4
1.7.1 Development Environment	5
1.7.2 Operating Environment	5
1.7.3 Maintenance Environment	5
1.8 Solution Strategy	5
1.9 System Acceptance Criteria	5
2.0 Project Acceptance Criteria	6

2. Project Plan

2.1 Life-Cycle Model: Agile Methodology	6
2.2 Organizational Structure	7
2.3 Staffing and Resource Requirements	8
2.4 Task Delegation Requirements	8
2.5 Development Schedule	9
2.6 Project Monitoring and Control Mechanisms	10
2.7 Tools and Techniques	10
2.8 Testing Requirements	10
2.9 Supporting Documents Required	10
2.10 Sources of Information	10-11

3. Appendices

3.1 Glossary of Terms	12-13
3.2 Team Resumes	14
3.2.1 Emma Bostian	14
3.2.2 Sara Pinti	15
3.2.3 Justin Rose	16
3.2.4 David Hall	17
3.2.5 Kevin Conner	18

SYSTEM DEFINITION

1.1 Problem Definition

Team evaluation is a crucial element to group projects as it facilitates individual as well as group improvement. However, on Siena's campus, an easily accessible method for evaluating teammates does not exist. With the life of the average college student becoming busier, meetings to discuss team strengths and weaknesses have become nearly impossible. Therefore, Nova Tech was approached by Dr. Erik Eddy to develop an online tool for team evaluations, allowing teammates to access the program at their own leisure and automatically informing each teammate, as well as the teacher, about team and individual performance. With this software, there are no surprises regarding which teammates are doing their share of the work and which are not.

1.2 System Justification

Nova Tech will program TEAMS 101: Team Evaluation in order to provide a means of evaluating team members throughout group projects. With a clean interface and user-friendly design, TEAMS 101: Team Evaluation will offer student and teacher levels, each with specific capabilities for the selected user type. This affords both students and teachers the opportunity to fix problems they see within the group dynamic.

1.3 Goals for the System and Project

Nova Tech's goal for this project is to allow students and professors different capabilities within the software. From the student vantage point, students will be able to choose which group member they are currently evaluating, at which time they will complete a questionnaire. This questionnaire will evaluate the strengths and weaknesses of the selected teammate, and also discuss the behaviors that could lead to improved group dynamic. The students responses are pooled and made anonymous on the student end. Students will be given access to reports filled out about them and can then look for ways to improve. Administrators will be able to view reports with submitter details including name and time of submission. They will be allowed to edit group members as needed if team problems persist.

1.4 Constraints on System and Project

- Our client wants this software to interact with Blackboard, however, we are not sure that we have access or the ability to integrate the two systems

- A form of user login/password is necessary to distinguish between system users
- In the event that an integration with Blackboard is not viable, we plan on the students being sent a link to an external website to complete their evaluations
- We must follow Siena College's user database guidelines when creating the software
- Because the website will be accessed by multiple users on different devices, we have to ensure that the web page appears cleanly on any device or any browser
 - This means we will not be able to include a detailed CSS (Cascading Style Sheet), or that, if we do, it may not be applicable to all devices
- Different landing pages for different user types will also be a constraint on the development of the software

1.5 Functions to be Provided

- A login screen for users (if we are unable to connect the site directly to Blackboard)
- Provide proper landing page based on whether the user is an administrator or a student
- Allow for the evaluation of team members maintaining anonymity
- Create a customized report based on team member evaluations and send to account user
- Allow administrators to see which students have completed the questionnaire
- Allow administrators to see what each students said regarding other group members

1.6 User Characteristics

Administrators will have the ability to:

- Create an evaluation form for groups to fill out
- Send out notification with link to external team evaluation website
- View results of evaluations including who has completed their evaluation form as well as the overall score of each team member based upon the other group members evaluations

Students will have the ability to:

- Login to an external evaluation website
- Complete evaluation form of group members
- View customized report based on evaluation of other team members

1.7 Environments

NovaTech will use the following environments in the process of creating the "Teammate Evaluation/Assessment" reports:

1.7.1 Development Environment

Our team will be utilizing the Software Engineering lab, personal laptops, and computers throughout the third floor of Roger Bacon Hall. We will be sharing information, code, and schedules with Google applications including Google Docs and Gmail.

1.7.2 Operating Environment

Operating System: Windows Vista
Proc: Intel Core 2 Duo E7500 @2.93GHz
RAM: 4GB
HDD: 500GB

1.7.3 Maintenance Environment

Server Hostname: oraserv.cs.siena.edu
CentOS 5.2 (final)
Kernel: 2.6.18-92.el5
Intel Xeon 2.66 GHz CPU
8 GB of Memory
Java SE Runtime Environment (build 1.6.0 10-rc-b28)
GCC Version 4.1.2 20071124 (Red Hat 4.1.2-42)

1.8 Solution Strategy

For the current software project, Nova Tech will be using the Agile Method to complete the project. This is a process in which requirements and solutions are developed and evolved throughout the lifetime of the project. It promotes continuous improvement and allows for flexibility and quick response to change. The plan to complete this software project includes:

- Define requirements
- Create software plan/ preliminary design
- Create detailed design
- Implement software
- Testing of software

1.9 System Acceptance Criteria

The main purpose of the “Teammate Evaluation/Assessment” software is to improve the process of evaluating team members in group dynamic. This software will be utilized by both students as well as teachers with administrative rights to the software. Students will receive evaluation from their team members and advice on how to improve within the group. Professors will be able to see who has finished their evaluations in the class as well as the score that is given to each student.

2.0 Project Acceptance Criteria

Nova Tech will contain the following features:

Professors/Administrators will be able to:

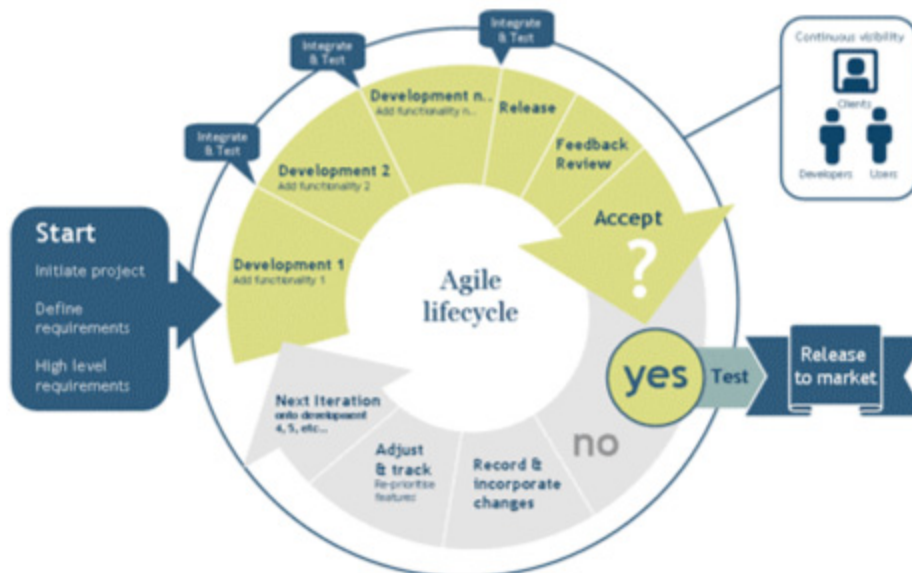
- Send out a link to the external evaluation website
- View completion of evaluation by students
- View evaluation score of individual students

Students will be able to:

- Evaluate other team members utilizing external web page
- Receive customized reports on performance by team members

PROJECT PLAN

2.1 Life Cycle: Agile Methodology



<http://www.zuztech.com/BSolution.html>

2.2 Organizational Structure

Name	Phone	Email
Emma Bostian	845-853-3187	e30bost@siena.edu
Kevin Conner	518-390-1449	kw30conn@siena.edu
Dave Hall	585-944-0497	dj21hall@siena.edu
Justin Rose	845-596-4138	jr01rose@siena.edu
Sara Pinti	315-727-4927	se09pint@siena.edu

Emma Bostian: Team Lead

The Team Lead is responsible for organizing and tracking attendance for both client/team meetings. As the main point of contact for the supervisor Dr. Fryling, the Team Lead holds team members accountable for on-time, good quality deliverables.

Kevin Conner: Webmaster

The Webmaster is responsible for the creation and maintenance of the team website. Duties include but are not limited to, updating relevant information, uploading important documents, and keeping the timeline up to date.

Dave Hall: Database Administrator

The Database Administrator is responsible for the design and maintenance of the database created for TEAMS 101 - Team Evaluation. Entity - relationship diagrams and relationship schemas of this database will also be made and documented by the Database Administrator.

Sara Pinti: System Administrator

The System Administrator holds the responsibility of adding and maintaining any necessary software and hardware pertaining to the system. An additional responsibility of the system administrator is documenting meeting notes and sharing the documents with the team lead and the rest of the team at Nova Tech.

Justin Rose: Software Engineer

The Software Engineer is responsible for the underlying design and implementation of all software. Actively participates in all parts of software development maintaining quality insurance, and a strong knowledge of the code structure behind user experience.

2.3 Staffing and Resource Requirements

In order to successfully accomplish our goals for TEAMS 101 - Team Evaluation, each member of Nova Tech will hold a different position and will be required to perform multiple tasks throughout the project. Nova Tech will be composed of a team lead, webmaster, database administrator, system administrator and software engineer. Nova Tech will be using the information and knowledge gained via previous classes and experience.

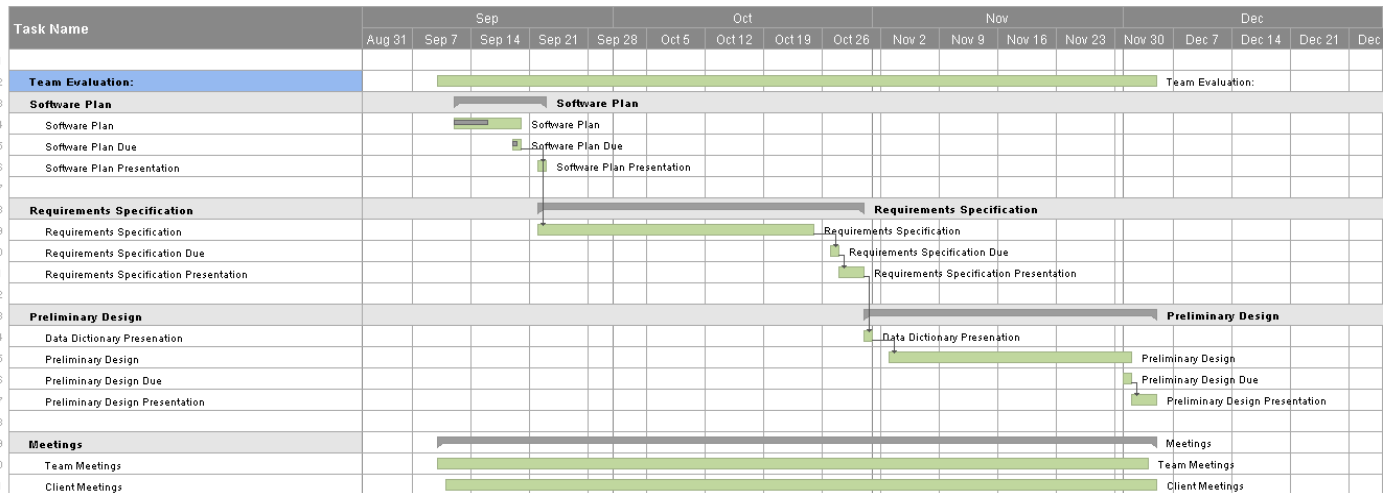
Nova Tech will utilize the Software Engineering lab of Roger Bacon which consists of both Macs running OS X and Dells running Windows. In addition, an Oracle SQL Server will be used as a database.

2.4 Task Delegation Requirements

The five members of Nova Tech will collaborate within the team, with the client Dr. Eddy, and supervisor Dr. Fryling. Nova Tech will delegate tasks evenly within the group. Nova Tech is a strong team of Software Engineers dedicated to completing necessary tasks to complete all projects to specification and is willing to go the extra mile to satisfy the client. Nova Tech is a close team with great interpersonal skills. All members of our team will play an integral role in the development of this project in order to provide the ultimate end product satisfaction.

2.5 Development Schedule

At Risk	Task Name	Start Date	End Date	Assigned To	% Complete	Duration	Predecessors
	Team Evaluation:	09/10/14	12/04/14			62	
	Software Plan	09/12/14	09/22/14		44%	7	
	Software Plan	09/12/14	09/19/14		50%	6	
	Software Plan Due	09/19/14	09/19/14		50%	1	
	Software Plan Presentation	09/22/14	09/22/14		0%	1	6
	Requirements Specification	09/22/14	10/30/14			29	
	Requirements Specification	09/22/14	10/24/14			26	5
	Requirements Specification Due	10/27/14	10/27/14			1	9
	Requirements Specification Presentation	10/28/14	10/30/14			3	10
	Preliminary Design	10/31/14	12/04/14			26	
	Data Dictionary Presentation	10/31/14	10/31/14			1	11
	Preliminary Design	11/03/14	12/01/14			21	14
	Preliminary Design Due	12/01/14	12/01/14			1	
	Preliminary Design Presentation	12/02/14	12/04/14			3	16
	Meetings	09/10/14	12/04/14			62	
	Team Meetings	09/10/14	12/03/14			61	
	Client Meetings	09/11/14	12/04/14			61	



*Created using SmartSheet

Nova Tech will hold weekly team meetings, as well as bi-weekly client meetings in order to ensure the efficiency and effectiveness of the project. The Gantt chart displays the due dates of major project requirements in order to promote effective time management strategies as well as to give a broad overview of the project timeline.

2.6 Project Monitoring and Control Mechanisms

In concordance with the weekly team meetings and bi-weekly client meetings, Nova Tech will keep clear, concise records of the client meeting notes, as well as the goals for each team meeting. Project documents will be shared with all team members, as well as the client, as a reinforcement of the meeting discussions.

2.7 Tools and Techniques

To create the Team Evaluation software, Nova Tech will utilize a multitude of prior collegiate course experience. Relevant courses include Database Management, Web Application Development, Web Design, Object-Oriented Design and Programming, Analysis of Algorithms, and Data Structures. Nova Tech will also employ skills and knowledge obtained during prior internship experiences at several technology companies.

Nova Tech will use specific applications and programming languages to develop the Team Evaluation software. These applications and programming languages include, but are not limited to, HTML, PHP, Java, JavaScript, mySQL, SQL, Notepad++, Eclipse, Gimp, Google Chrome, Gmail, Mozilla Firefox, Internet Explorer, Safari. These applications will be used to develop the software, and to ensure that the Team Evaluation application runs efficiently on a multitude of web browsers.

2.8 Testing Requirements

Nova Tech will systematically conduct testing for any bugs and functionality issues throughout the entire development process. As the development progresses, more detailed test cases will be carried out and documented.

2.9 Supporting Documents Required

Multiple supporting documents will be created as the project develops and will be made available to the client. These documents and the dates that they will be presented are as follows:

- Software Plan - September 23rd, 2014
- Requirements Specifications - October 28th, 2014
- Preliminary Design - December 2nd, 2014
- Detailed Design - Spring 2015
- Acceptance Test - Spring 2015

2.10 Sources of Information

The information that Nova Tech will utilize in creating this software will primarily come from the client, Dr. Erik Eddy, Dr. Fryling via our class lectures, and Dr. Lim in our lab activities. Auxiliary information may come from various other technical classes that our team members

have taken, including Database Management and Web Application Development. Charts were created using several websites including:

- www.smartsheet.com
- <http://www.zuztech.com/BSolution.html>

APPENDICES

3.1 Glossary of Terms

Agile method: Agile software development is a group of software development methods in which requirements and solutions evolve through collaboration between self-organizing, cross-functional teams

HTML (HyperText Markup Language): main markup language for creating web pages

CSS (Cascading Style Sheets): A style sheet language used to make web pages visually appealing

Database: Organizes data, typically through a computer, so that the data is easily accessible

Eclipse: Programming environment developed by the Eclipse Foundation

GIMP (GNU Image Manipulation Program): Image retouching and editing tool released as free and open-source software by creators Spencer Kimball and Peter Mattis

Gmail:

Google Chrome: Web browser designed by Google

Internet Explorer: Web browser designed by Microsoft

Java: Object-oriented programming language developed by and maintained by the Oracle Corporation

JavaScript: A scripting language that is run on web pages in a browser

Mozilla Firefox: Web browser designed by Firefox

mySQL (Structured Query Language): Programming language designed to manage data and develop databases

Notepad++: Text editor specializing in syntactic highlighting of various programming languages

Nova Tech: Team name.

PHP: Hypertext Preprocessor, a programming language used for developing client-side scripts for web browsers

Safari: Web browser designed by Apple

SQL Developer: Program used to create and modify database

TEAMS 101 - Team Evaluation: Project name.

EMMA J. BOSTIAN

124 Rokeby Road, Red Hook, NY 12571 ▪ E30Bost@Siena.edu ▪ (845) 853-3187

OBJECTIVE

To obtain an entry level software development position with a technology company, where I can utilize my Java development and test automation experience.

EDUCATION

Siena College - Loudonville, NY **May 2015**

Bachelors of Science in Computer Science; Minor - Business

Dean's List 2 semesters

City University - London, England, Study Abroad Program **December 2013**

SKILLS

Programming Languages- Java, Python, Web Development (HTML, CSS), and Assembly.

- Proficient in Java, Python, HTML, CSS, Assembly.
- Experience with Java and Python.

Programming Skills - Analysis of algorithms, object-oriented programming, database management, web application development, experience with cryptography and security, test automation.

Development Environments - Eclipse and BlueJ.

Software - WebSphere Application Server, Git, and iPython.

Leadership - Siena College Pep Band Manager, Siena College Admissions, Siena College Orientation Leader.

Additional - Effective team player, creative and effective problem solver.

EXPERIENCE

IBM - Poughkeepsie, NY; **Co-Op/Intern Programmer** **May 2014 - Present**

- Automated the installation of WebSphere Customization Toolbox on z/OS using Python.
- Coordinated a video for the EPIC (Employment Pathways for Interns and Co-ops) national video contest.
- Received award for most comical EPIC video.

Siena College Pep Band -Loudonville, NY; **Manager** **September 2011 - Present**

- Organize the music and logistics of the band for the Siena College men and women's basketball season.
- Assist in running weekly band rehearsals.

Siena College Admissions - Loudonville, NY; **McGuire** **September 2011 - Present**

- Give interviews to prospective students.
- Attend Siena College open houses and converse with families.

AWARDS

First Year Seminar Leadership Conference presenter, Dean's List 2 semesters.

Sara Pinti

47 Timber Drive Waterford, NY 12188 Cell: 315-727-4927 shalkast1@yahoo.com <http://www.linkedin.com/in/sarapinti>

OBJECTIVE

To obtain a career in Software Engineering or Development within a thriving corporation that is willing to challenge and allow successful growth based on education and work related experience.

COMPUTER SKILLS

Android and iOS Operating Systems	Expert	11 Years
Java, Data Structures and Object-Oriented Programming	Proficient	3 Years
JavaScript, PHP, MySQL, and SQL	Proficient	3 Years
HTML/5, CSS/3, XML, and XSL	Proficient	3 Years
GIMP, Photoshop, Flash, Dreamweaver and other Adobe CS5	Proficient	3 Years

EDUCATION

Bachelors of Science, Siena College, Latham NY
Major: Computer Science

Expected graduation spring 2015

Associate in Applied Sciences, Hudson Valley Community College, Troy NY
Major: Web Design and WWW Programming
GPA 4.0/4.0

May 2013
Honors

Associate in Applied Sciences, Onondaga Community College, Syracuse NY
Major: Electronic Media Communications
GPA 3.6/4.0

December 2004
Magna cum Laude

PROFESSIONAL EXPERIENCE

Intern

Systems Implementation Inc., Troy, NY

January, 2013 - May, 2013

- Created and maintained social media including photo and company logo editing
- Researched and created software solutions for user related matters using Java, JavaScript, and PHP
- Worked both on site and remotely with little to no supervision

Retail Sales Representative

Verizon Wireless, Clifton Park, NY

June, 2008 - November, 2011

- Sold new services and equipment while achieving and/or exceeding quota/revenue targets
- Expert in equipment troubleshooting, repair and equipment functionality of all cellular operating systems including iOS and Android
- Provided policy and procedure explanations on a daily basis for contract signing and legal documents
- Assisted staff and customers with email setup, including imap, pop3 and MS Exchange

Assistant Retail Operations/Retail Customer Support

Verizon Wireless, Liverpool, NY

August, 2000 – May, 2008

- Regulated store flow and made management decisions when management not present in store and by phone
- Performed semi-annual/monthly/weekly physical inventory counts/audits and store observations of customer care representatives
- Resolved inventory discrepancies and followed guidelines to prevent loss

HONORS AND AWARDS

- Award for exemplary achievement in the study of CIS - Web Design and WWW Programming at Hudson Valley Community College
- Phi Theta Kappa National Honor Society Member - Fall 2012 – present
- World of Thanks Award - Verizon Wireless- Awarded for assisting multiple districts in adapting to new software program

Justin R. Rose
 12 Bridge Terrace, Fort Montgomery, NY 10922
 (845)-596-4138
 jr01rose@siena.edu

Objective

- Secure a position in a computer-science career

Education

- Siena College, Loudonville, NY
 Computer Science Major
 Expected Date of Graduation: May 2015
 Overall GPA: 3.26
- Relevant Coursework: Cryptography and Security, Object-Oriented Design and Programming (Java); Data Structures (Java); Analysis of Algorithms (Java); 3D Programming with Alice (Alice); Assembly Language and Computer Architecture (MIPS); Freshmen Seminar- Technology and Social Change; Discrete Mathematics I; Discrete Mathematics II; Cryptography

Honors/Awards

- Inducted into Upsilon Pi Epsilon, the National Computer Science Honor Society
- Presidential Scholar at Siena College; offered to students with minimum GPA of 90

Experience

-Educator for iDTech: Harvard Campus, Latonia Baker, Cambridge, MA, July 2014

E-mail: lbaker@idtech.com

- Taught adolescents ages 13-18 Java utilizing Minecraft, developed better scheduling abilities
- Counseled and acted as an RA for students while working on teamwork and leadership skills

-Software Developer, Neil Manders, London, United Kingdom, September-December 2013

E-mail: neil.manders@mrunderwriting.com

- Developed a weather-tracking and risk-assessment application for use and expansion, hands-on professional coding experience obtained
- Learned Microsoft SQL Server

-Academic Intern, Professor Johanna Horowitz, Loudonville, NY, June-July 2012

E-mail: horowitz@siena.edu

- Worked collaboratively with two professors and other interns to create labs for introductory-level computer science students, enhancing team coordination skills
- Developed programs that incorporated the Finch robot to further interactive learning, expanding problem-solving abilities

-Computer Science Camp Counselor, Dr. MaryAnne Egan, Loudonville, NY, August 2012

E-mail: maegan@siena.edu

- Worked with and taught computer science campers, ages 5-8, increasing leadership potential

Computer and Language Skills

- High-level experience programming in Java; began working with Java in high school
- Experience programming in Python, HTML, Alice, MIPS, and Microsoft SQL Server
- Intermediate proficiency in Spanish language, 5 years of study
- Beginner proficiency in German Language

David J. Hall

254 Lenox Ave. Albany NY 12208 • 585-944-0497 • dj21hall@siena.edu

Objective

A **self-motivated leader** with experience **owning and operating a business**, possessing a broad background in computer science/business seeking an internship in the computer science field.

Education

SIENA COLLEGE, Loudonville, NY (expected graduation – May, 2015)

B.S. in **Computer Science**; Minor in **Economics**

GPA: 3.6/4.0

President's List: Spring 2012, Spring 2013, **Dean's List**: Fall 2011, Fall 2012

Relevant Coursework

Object Oriented Programming | Database Management Systems | Android Application Development | Analysis of Algorithms | Software Engineering | Assembly Language | Data Structures

Skills

Software: Java programming | Object Oriented | HTML5/CSS | XML | MS Word | MS Excel

Relevant Experience

Summer Legal Fellowship, Albany Law School, Albany NY, Summer 2014

- Researched intellectual property and entrepreneurship
- Wrote publications based on research conducted
- Drafted legal documents for clients of Government Law Center, including a non-compete agreement, terms of service, privacy policy, and non-disclosure agreement

Team Captain and Co-President, Siena Ultimate Frisbee, Loudonville NY, 2011-2013

- **Manage team budget** of \$6,000, including initial designing and implementation
- Schedule team travel tournaments, book hotels, plan transportation, track expenses
- Run practices 5 days a week, plan team meetings, meet with campus programs
- **Independently** build team website

Student Intern, Stewart Title Insurance, Rochester Branch, summer 2013

- Record mortgages, foreclosures, and other legal documents for various lawyers
- Interact with various levels of clients and co-workers, from lawyers to clerks to upper management at the firm

Entrepreneur, College Power Washing, Rochester NY, summer 2012- summer 2013

- Performed all management duties, including handling profits, expenses, and customer logs with MS excel
- **Market services** with hundreds of flyers, social media, as well as interact with potential customers in person
- Worked 15-20 jobs a summer, specializing in siding cleaning

Kevin W. Conner

74 Rockrose Drive ▪ East Greenbush, New York 12061 ▪ (518) 390-1449 kw30conn@siena.edu

Career Objective: Secure a computer science based career

Education: **Siena College**, Loudonville, New York
Major: Computer Science
GPA: 3.45/4.0
B.S. in Computer Science
Anticipated Graduation 2015

Relevant Coursework: Intro to Programming, Data Structures, Digital Photography, Biology, Object Oriented Programming, Algorithms, Database Management, Web Design, Web Applications, Software Engineering

Honors: **Siena College Dean's List**, Fall Semester 2012, Spring Semester 2013
Presidential Scholar, 2011-Present

Employment: **Intern**, Albany County Executive Office, Summer 2014

- Assisted with shooting and editing of video, as well as various aspect of production for video shoots.
- Worked with various departments for in-house public service announcements, as well as updating the Albany county website and assorted other web and audio visual production responsibilities.

Summer Conference Assistant, Siena College, Summer 2014

- Interacted with conference services staff in order to coordinate summer conference events. Facilitated the needs of guests during conferences.

Intern, Regeneron Pharmaceuticals, Summer 2013

- Aided in upgrade of company wide learning management system, including testing different environment functionalities.
- Worked with database administrator in documenting upgrade process for regulatory review. Participated in project team meetings. Presented findings and project updates to senior leadership.

Skills: Microsoft Office, Java, Python, HTML5, CSS, Adobe Creative Cloud

Activities: **Siena College Gaelic Society**, 2012-Present

- Participate in charity events and promote Irish culture and heritage on campus.

Siena College Computer Science Club, 2013-2014

- Participate in computer science related events as well as discuss new technologies.