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Pro-Resume: The Infographic Resume Builder

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June 9, 2017

I HEREBY RECOMMEND THAT THE THESIS PREPARED
UNDER MY SUPERVISION BY

Ivy Wu, Kyra Wayne, Sanika Lakka, and Tanisha Rai

ENTITLED

PRO-RESUME: THE INFOGRAPHIC RESUME BUILDER

BE ACCEPTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE
DEGREE OF

**BACHELOR OF SCIENCE
IN
WEB DESIGN AND ENGINEERING**



THESIS ADVISOR

DEPARTMENT CHAIR

PRO-RESUME: THE INFOGRAPHIC RESUME BUILDER

by

Ivy Wu, Kyra Wayne, Sanika Lakka, and Tanisha Rai

SENIOR DESIGN PROJECT REPORT

Submitted to
The Department of Computer Engineering

of

SANTA CLARA UNIVERSITY

In partial fulfillment of the requirements
for the degree of
Bachelor of Science in Web Design and Engineering

Santa Clara, California

2017

Pro-Resume: The Infographic Resume Builder

Ben Steichen

Department of Computer Engineering
Santa Clara University
2017

ABSTRACT

Scoring an interview is a challenge for any job seeker these days, thus having a unique and well-organized resume is crucial to grab a recruiter's attention. Online resume builders such as ResumeNow and VisualizeMe have been created to help users build resumes; however, their templates are lacking in quantity, customizability, and in some instances, even legibility. Thus, our team set out to create an infographic online resume builder, a web application that allows its users to build, organize, and beautify their resumes to aid them in their job search. Our system allows for easy integration with their LinkedIn profiles so that their work history can be easily duplicated without typing everything out. There is also a large scope of infographic template options that users can choose from and, most importantly, users will have the ability to further customize their content and organization by using the system's editing mode.

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CHAPTER 1 - INTRODUCTION

Being a student in college is one of the most stressful periods in a young adult's life. It is the time in which individuals determine their career paths, all while finding their independence and fighting to be successful students and employees. In order to do so, students must showcase their talents, experiences, and skills on a single sheet of paper: the resume. Resumes represent who students are, not only as employees, but as teammates; thus, there is a lot of pressure on students to create flawless portfolios. Many students do not have practical knowledge in the process of creating a resume. For those who do, it is still difficult to describe one's achievements and to determine which items will look most appealing to modern day employers. Hence, there is a necessity for a solution that aids students in creating effective resumes that will help them achieve their goals and set them on the right path for a successful post-graduate career.

Many students have been trained to format their resumes using word processing programs like Microsoft Word or Apple Pages. While intuitive to many users, this manual method of designing resumes requires brute force in formatting text, and leaves students with uninspiring, verbose resumes. The easiest method today is to use online resume builders like resume-now.com or isualize.me, which allow users to upload preexisting documents or login with LinkedIn for efficient reusability. Resume-Now is the most popular solution since it is free, has hundreds of template options, and boasts numerous additional features. However, Resume-now only has archaic text-based resumes, which is no longer sufficient enough to grab recruiters' attentions. This was succeeded by a newer solution, Vizualize.me, which trades out quantity for quality, and focuses solely on creating templates for infographic resumes. These infographic designs and color schemes, however, are unreadable, only come with three templates with limited customizability, and use meaningless boxes as symbols in their infographics. This will do more harm than good in applying for jobs, and also will cost the user money out of pocket for printing. Lastly, there is no current solution that builds resumes to appeal to specific kinds of jobs, even though it is common practice today to design separate resumes for different applications.

Our solution is a free web application that generates creative and personalized infographic resumes with little effort. Our system will allow users to login via LinkedIn and will automatically populate text areas with their experiences, education, skills and hobbies within several different templates that appeal to specific jobs (i.e. engineers like to see languages and skills first, while other positions want to see experiences listed first). In the case of creating a first resume, our application will provide tips for strong word choices in real-time that will provide users with confident-sounding job descriptions. Users will also have full customizability options: we will provide an optional blank template for users to design a resume in their own style. These templates will provide a user-friendly experience and a larger scope of options to utilize the user's creativity. We are confident that the final product will provide students with a uniquely personalized resume that will stand out to employers.

CHAPTER 2 - REQUIREMENTS

I. FUNCTIONAL REQUIREMENTS

CRITICAL

- The system will have a portal for creating a new account and/or logging into an existing account.
- The system will allow for users to enter or upload personal data.
- The system will allow for users to update their profile information.
- The system will generate a complete resume after the user inputs information and chooses one or more templates.
- The system will store the user's information in a secure database.

RECOMMENDED

- The system will have templates for different kinds of jobs.
- The system will allow users to modify resume styling.

SUGGESTED

- The system will have a read-only portal for employers to see a user's online resume.

II. NON-FUNCTIONAL REQUIREMENTS

CRITICAL

- The system will be reliable.
- The system will be secure.
- The system will be accessible.
- The system will be user-friendly.

RECOMMENDED

- The system will be visually pleasing.
- The system will be responsive.

SUGGESTED

- The system will be well-documented.

III. DESIGN CONSTRAINTS

CRITICAL

- The system will work on all browsers.
- The system will be a web application.

RECOMMENDED

- The system will produce a resume that will fit onto a single page.

SUGGESTED

- The system will be mobile-friendly.

CHAPTER 3 - USE CASES

Use Cases demonstrate the possible actions a user can take. The listed narratives on the following pages go into greater detail regarding the goals and necessary pre- and postconditions of each action as well as any exceptions to these actions that may occur.

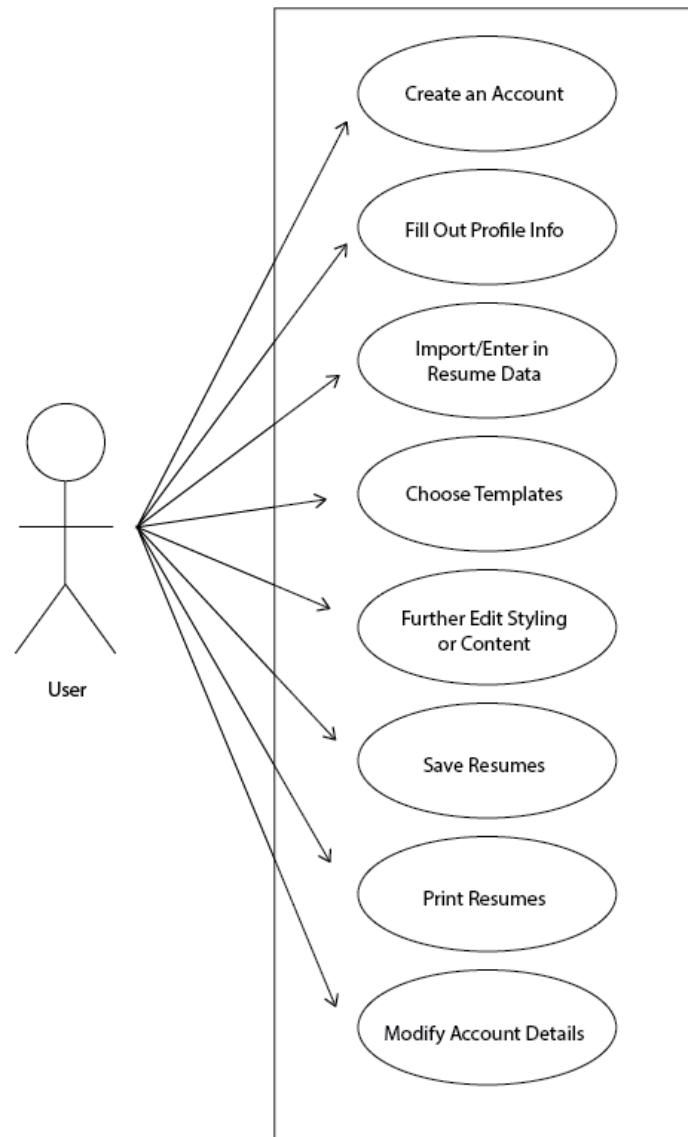


Figure 3-1 Use Cases

I. CREATE ACCOUNT

- Goal: To gain access to our infographic resume builder web app and to create an modifiable system profile and multiple resumes.
- Actor: User
- Precondition: The user is currently accessing the web application.
- Postcondition: The user will have a resume builder account.
- Exception: The user cancels before the application process is complete, or the user's email or LinkedIn account cannot be verified.

II. FILL OUT PROFILE INFORMATION

- Goal: To help the system create infographic resumes that displays the user's personality and professional interests.
- Actor: User
- Precondition: The user has begun the account creation process.
- Postcondition: The user will progress to the next step in the account creation process and the web application will have some account details for consideration in designing infographic resumes for the user.
- Exception: The user decides to skip these questions.

III. IMPORT/ENTER RESUME DETAILS

- Goal: To have up to date information that reflects the user's account information, contact details, and resume details.
- Actor: User
- Precondition: The user has begun the account creation process either through the LinkedIn SDK portal or through an email account, and the user has relevant resume information to include.

- Postcondition: The user will have a completed resume builder account with saved resume details.
- Exception: The user cancels before completing the account creation process, or his or her email or LinkedIn cannot be verified, or the system cannot connect to the database server.

IV. CHOOSE TEMPLATES

- Goal: To select and utilize templates that attest to the user's personality and career preferences.
- Actor: User
- Precondition: The user has a completed account.
- Postcondition: The template is saved to the user's account
- Exception: None.

V. FURTHER EDIT STYLING OR CONTENT

- Goal: To modify resumes in the user profile with different visuals, colors, and featured content.
- Actor: User
- Precondition: The user has a completed account.
- Postcondition: The user has modified resumes that he or she has the option to save.
- Exception: The user cancels the modification process or changes the resume back to its original state.

VI. SAVE RESUMES

- Goal: To have saved resumes that the user can access whenever they log into the system
- Actor: User
- Precondition: The user has a completed account and has made changes to one or more templates.

- Postcondition: The user's resumes' details will be saved to the database.
- Exception: The system fails to connect to the database server.

VII. PRINT RESUMES

- Goal: To have a physical or PDF infographic resume that is ready to be sent to employers.
- Actor: User
- Precondition: The user has up-to-date account information and has completed modifying his or her resume as necessary, and has the desire to print his or her resume for an job application.
- Postcondition: The user has a physical, printed resume or a digital PDF copy.
- Exception: None.

VIII. MODIFY ACCOUNT DETAILS

- Goal: To update the user's resume information and objectives.
- Actor: User
- Precondition: The user already has an account.
- Postcondition: All resumes will be updated.
- Exception: The user does not save his or her modifications, or the system cannot connect to the database server.

CHAPTER 4 - ACTIVITY DIAGRAM

The Activity Diagram displays the series of actions that a user commits when navigating through our system, from accessing the webpage and making a new account or logging into a pre-existing account, to eventually logging out. A new user must create an account and has the options to either log in via LinkedIn or to use a personal email. Users with accounts can then fill out or modify their resume information, choose templates and graphics before printing or saving their work. Returning users can also edit their pre-existing infographic resume or create a new one before saving or printing and logging out.

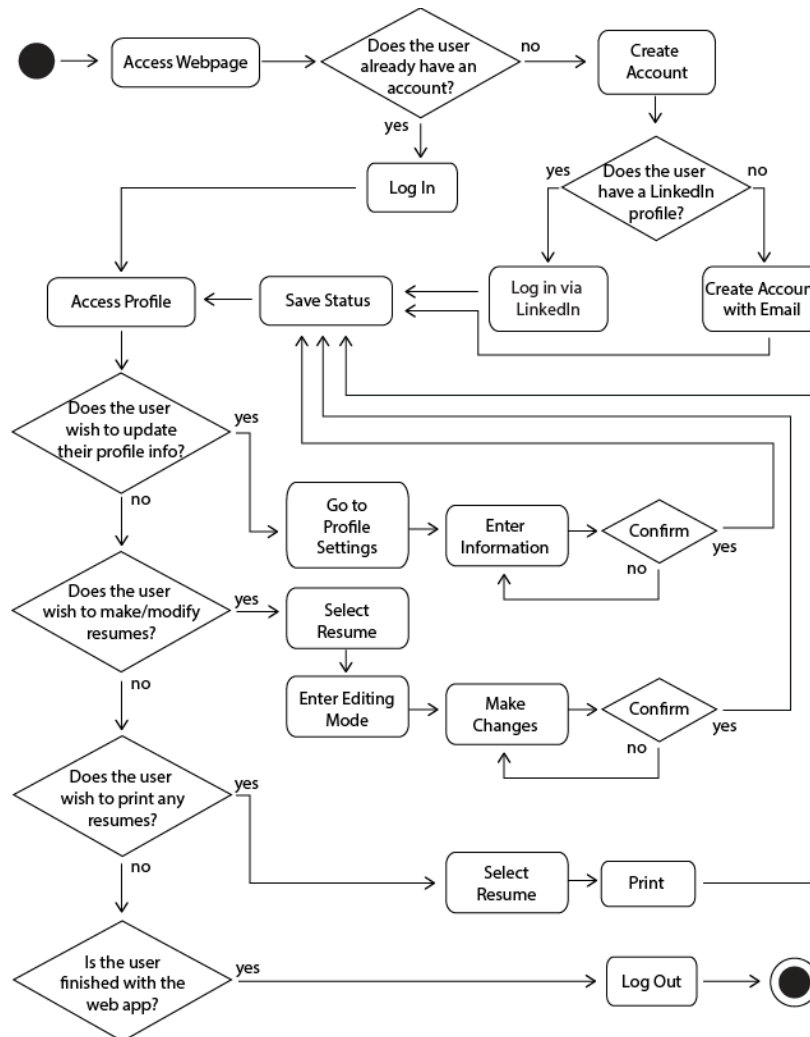


Figure 4-1 Activity Diagram

CHAPTER 5 - PROTOTYPE

These screenshots illustrate the system's minimalist layout for usability. Before creating an account, the user can scroll through the home page to learn more about the resume designer, how it works, and to see sample resumes built by the system. If the user decides to create an account, the user then has the option to answer survey questions about his or her desired color schemes and career paths for a more customized experience.

Afterward, the user will be led through a series of forms relating to his or her work history; for efficiency, users also have the option of logging in via LinkedIn so that our system can populate these forms automatically, which only requires for the user to verify that the information is displayed correctly. The user has access to these forms and the previous survey questions at any time for updates.

The heart of our system will be in the resume editing window, which allows for users to select what information they want to feature as well as how they want that information to be displayed. The left side scrollbar contains all of the possible elements from which the user can choose. After making any edits the user can exit the page knowing that his or her resume has been saved to a secure database which is re-accessible upon logging in to the system.

I. HOMEPAGE

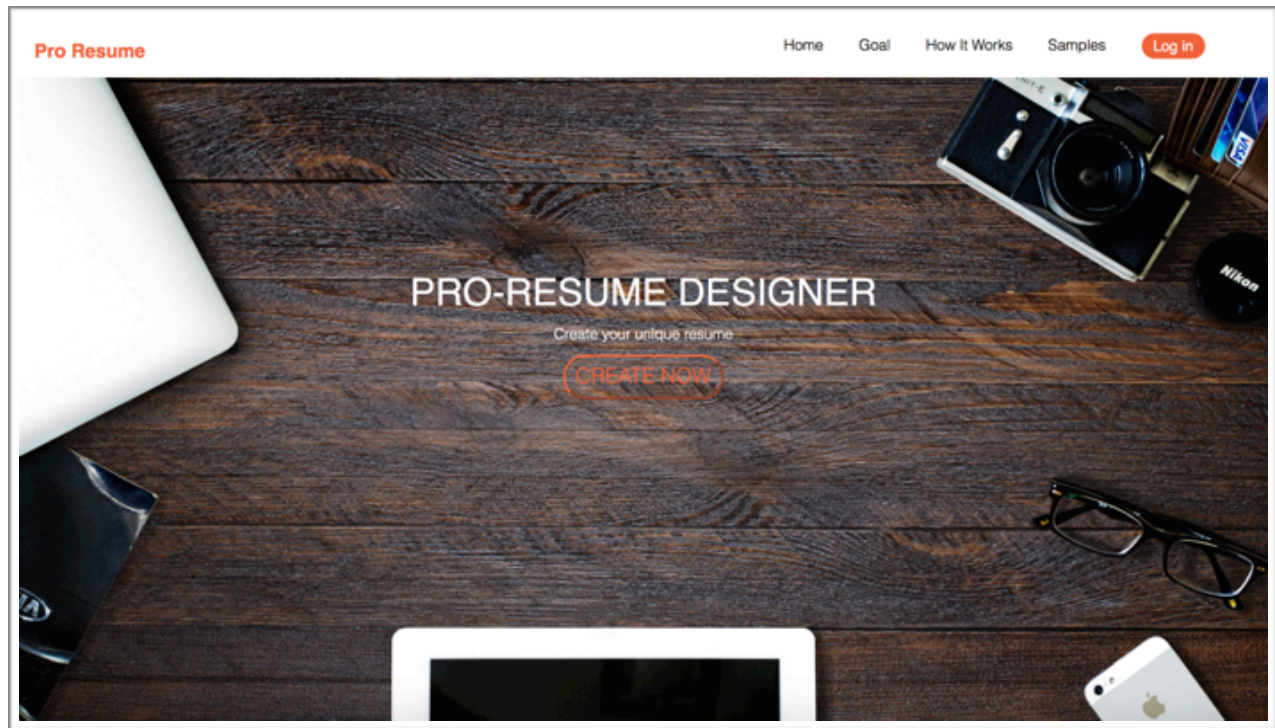


Figure 5.1-1 Homepage featuring a call-to-action to create an account

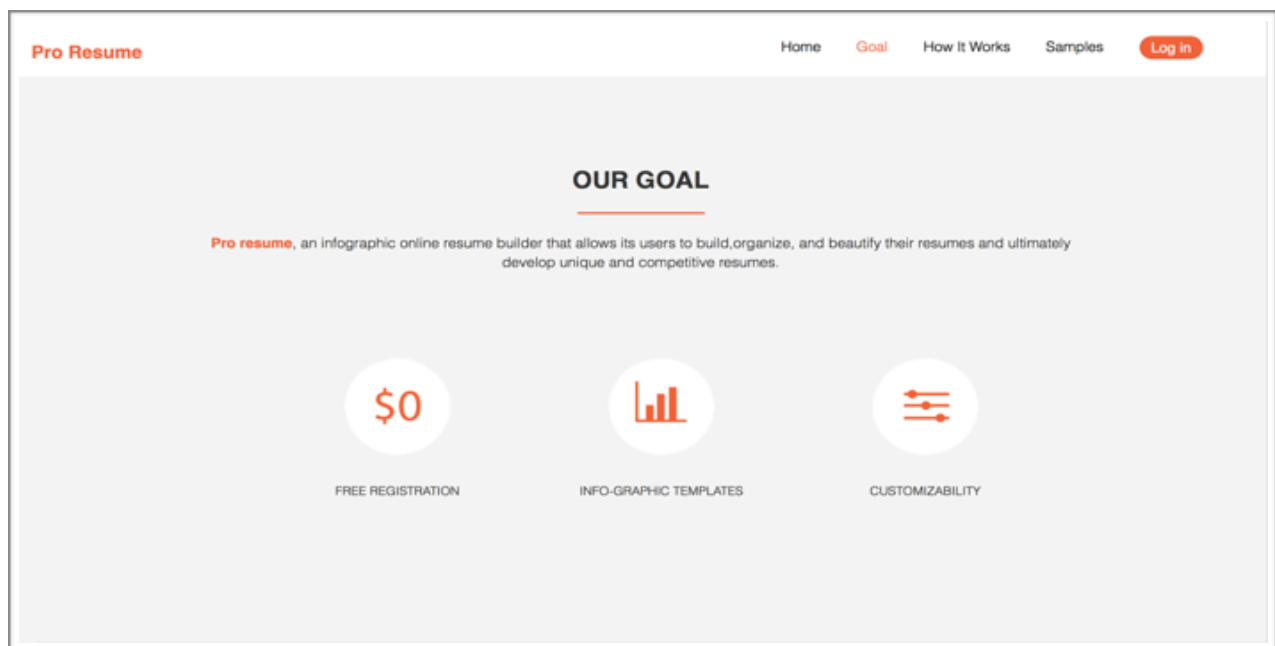


Figure 5.1-2 Homepage section featuring the goals of Pro-Resume

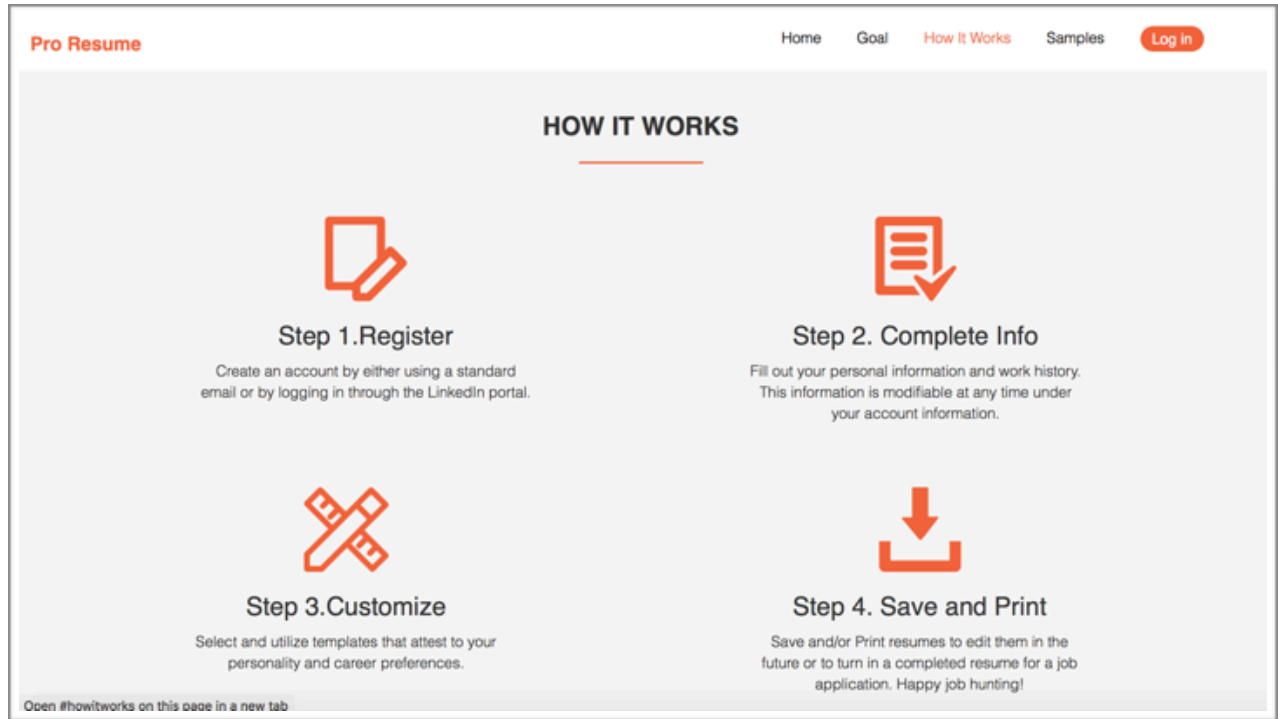


Figure 5.1-3 Homepage section with instruction on how Pro-Resume works

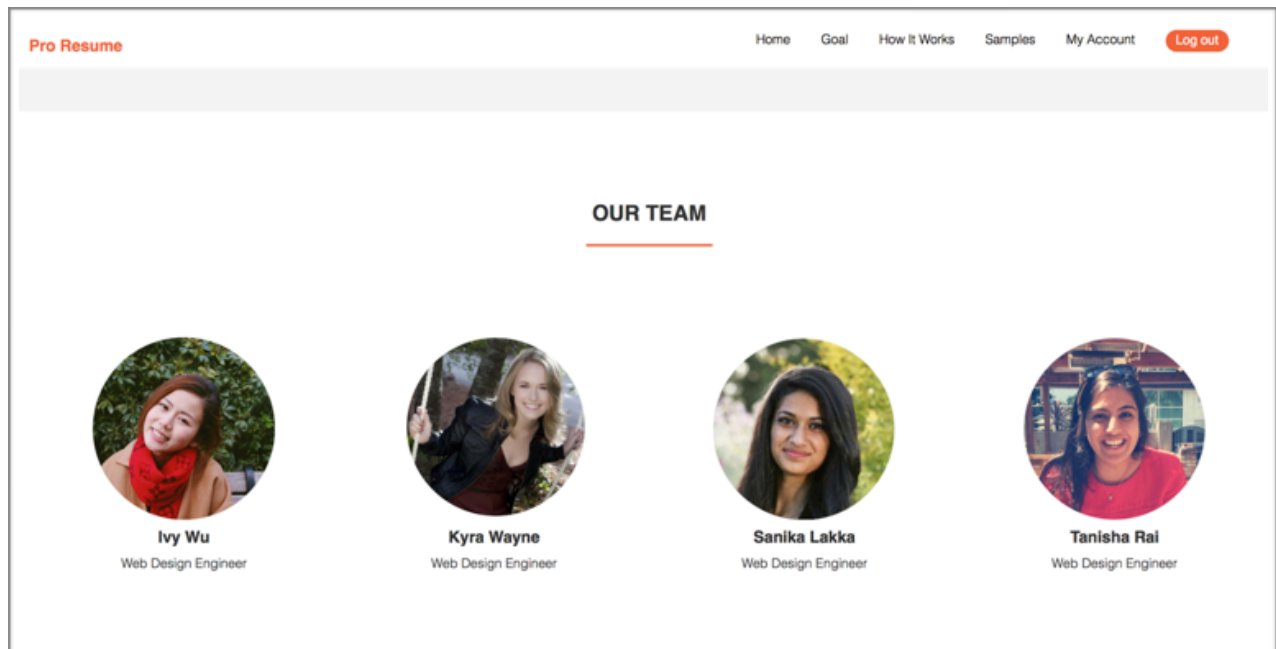



Figure 5.1-4 Homepage section featuring our team


Pro Resume Home Goal How It Works Samples Log In

SAMPLES




Business

This red resume features strength and ambition and showcases work experience first to appeal to business employers.



Engineering

This blue resume features intelligence and calmness under pressure and showcases projects and software and language skills first to appeal to engineering employers.



Non-Profit

This green resume features sustainability and showcases volunteer projects first to appeal to non-profit employers.

[View Samples on this page in a new tab](#)

Figure 5.1-5 Homepage section featuring samples of infographic resumes

II. LOG IN

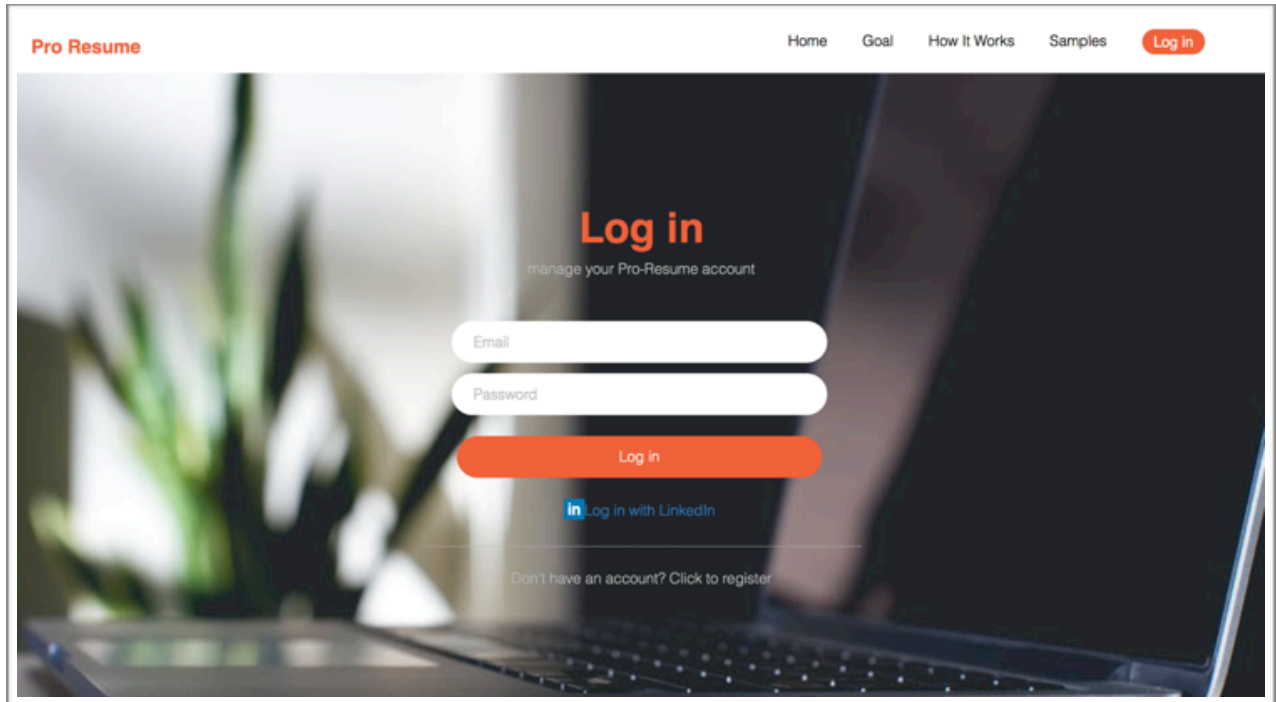


Figure 5.2-1 Log in page with LinkedIn portal

III. CREATE AN ACCOUNT

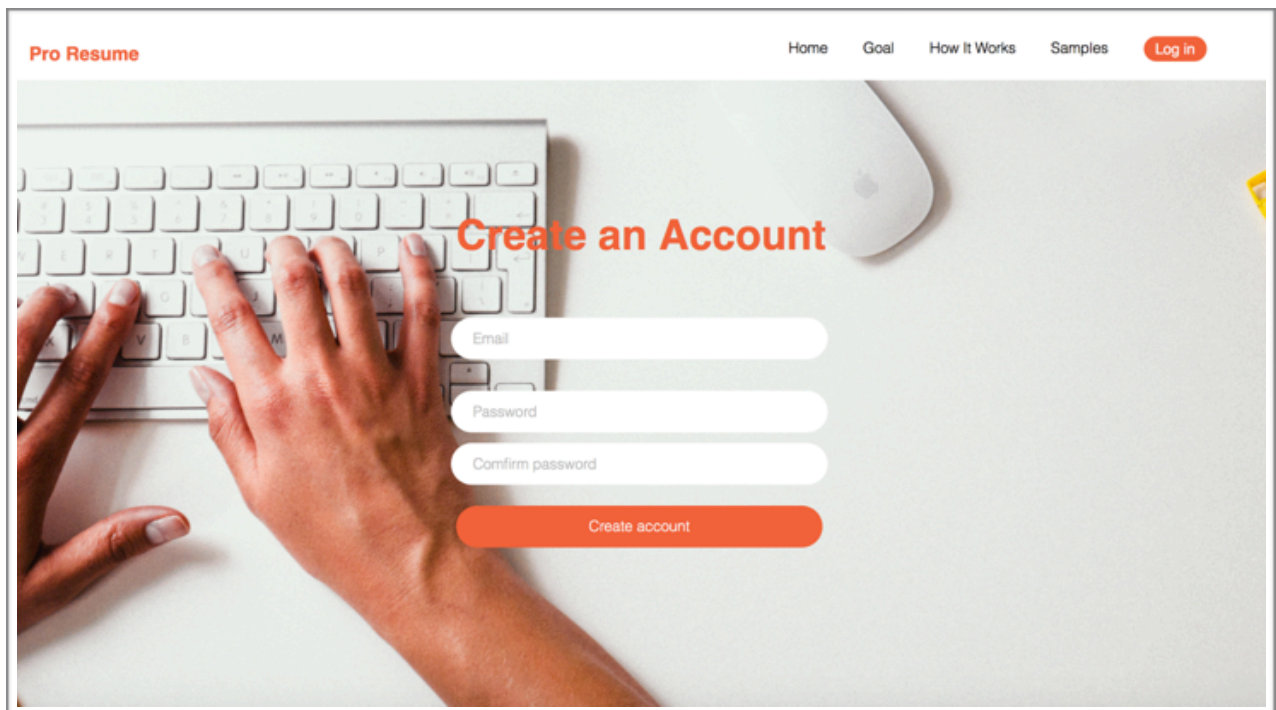


Figure 5.3-1 Portal for creating a new account

IV. LOG IN THROUGH LINKEDIN

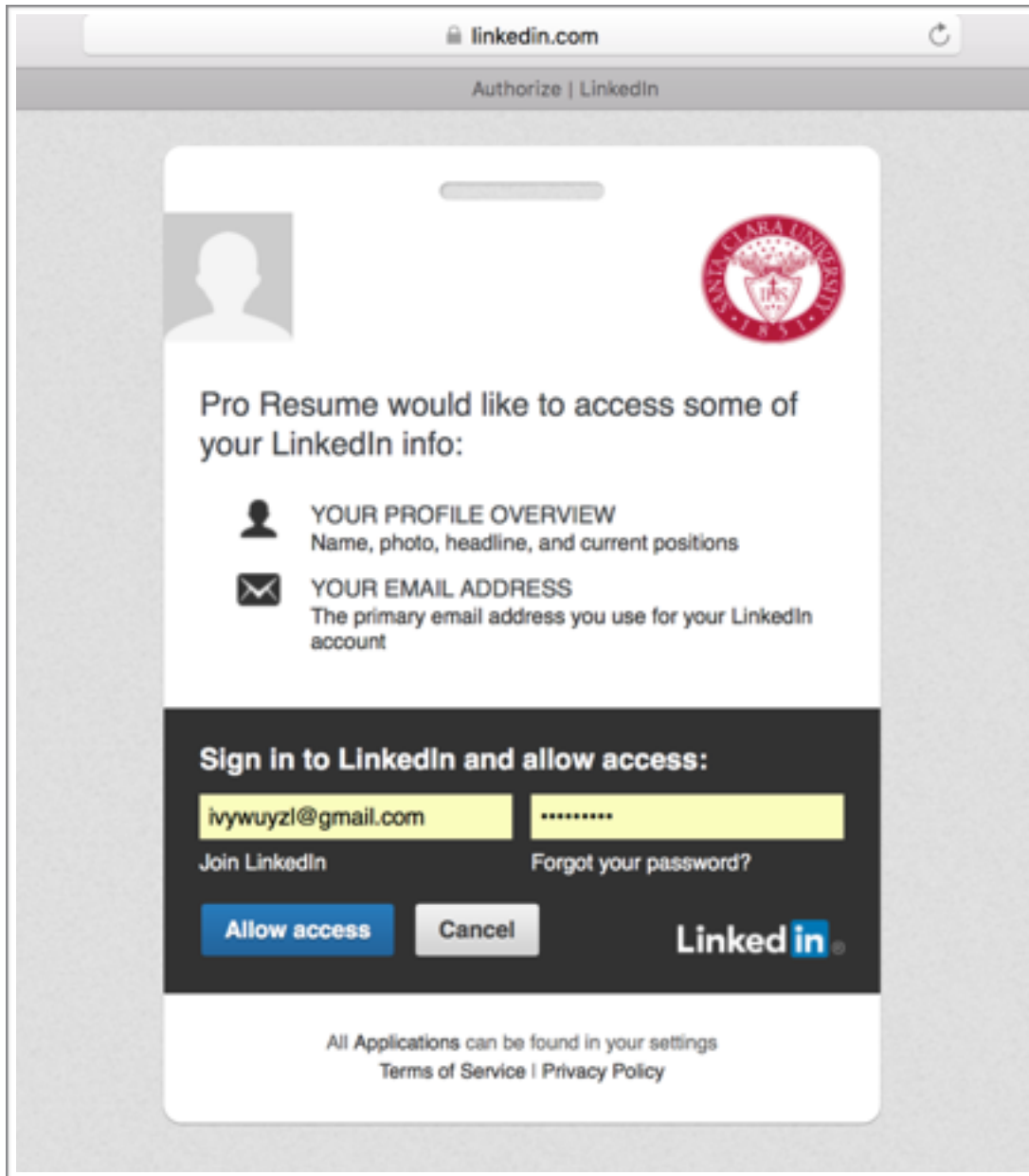


Figure 5.4-1 Logging in through the LinkedIn SDK

V. ACCOUNT DETAILS FORM

The screenshot shows the 'Pro Resume' website interface. At the top, there is a navigation bar with links for 'Home', 'Goal', 'How It Works', 'Samples', 'My Account', and a 'Log out' button. Below the navigation bar, a blue banner reads 'Resume Details: Please fill in the details for your resume.' On the left side, there is a vertical menu with options: 'Account Information' (highlighted), 'Objective', 'Personal Statement', 'Education', 'Experience', 'Skills', 'Projects', 'Hobbies', 'Volunteer', and 'Awards/Honors'. A 'Submit' button is located at the bottom of this menu. The main content area is titled 'Account Information' and contains several input fields: 'first name' and 'last name' (two separate boxes), 'city', 'state', and 'country' (three separate boxes), a phone number field with a placeholder '(xxx)xxx-xxxx', 'personal website', and 'alternative email' (two separate boxes).

Figure 5.5-1 Basic account information form

The screenshot shows the 'Pro Resume' website interface with the 'Objective' form selected. The left-side menu is the same as in Figure 5.5-1, but 'Objective' is now highlighted. The main content area is titled 'Objective' and features a single large text area for entering the user's objective. A 'Submit' button is located at the bottom of the left-side menu.

Figure 5.5-2 Objective text box form

Account Information

Objective

Personal Statement

Education

Experience

Skills

Projects

Hobbies

Volunteer

Awards/Honors

Submit

Statement

Figure 5.5-3 Personal statement text box form

Account Information

Objective

Personal Statement

Education

Experience

Skills

Projects

Hobbies

Volunteer

Awards/Honors

Submit

Education

School

Major

(optional)

Minor

(optional)

Year start

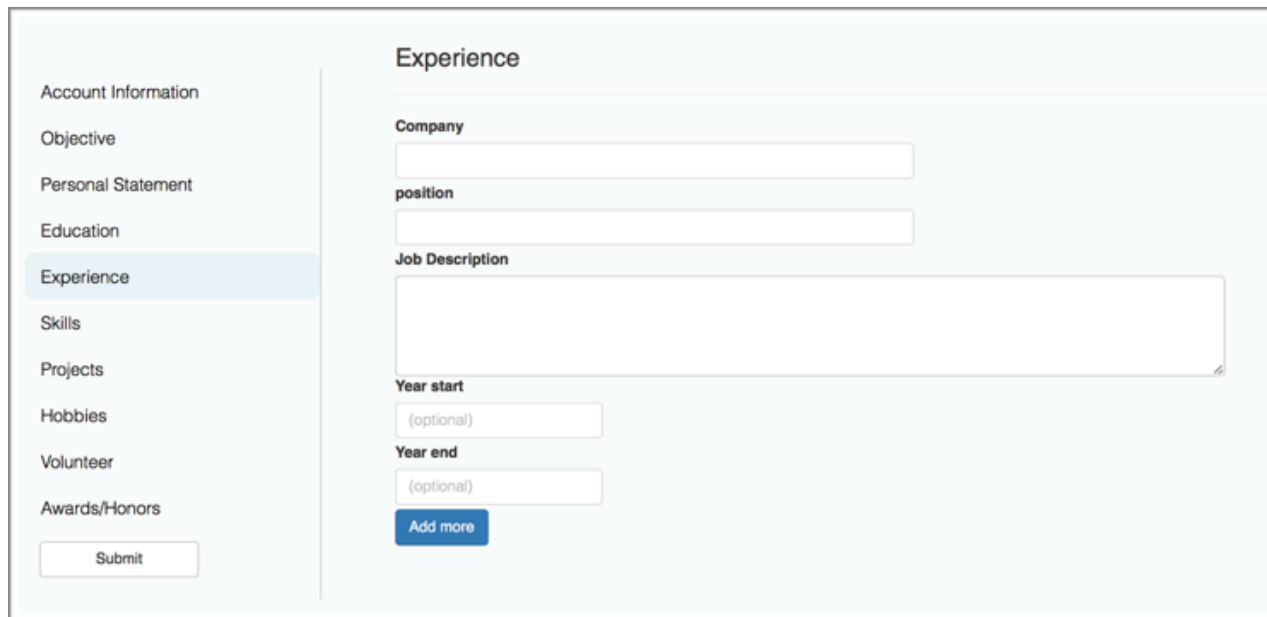
(optional)

Year end

(optional)

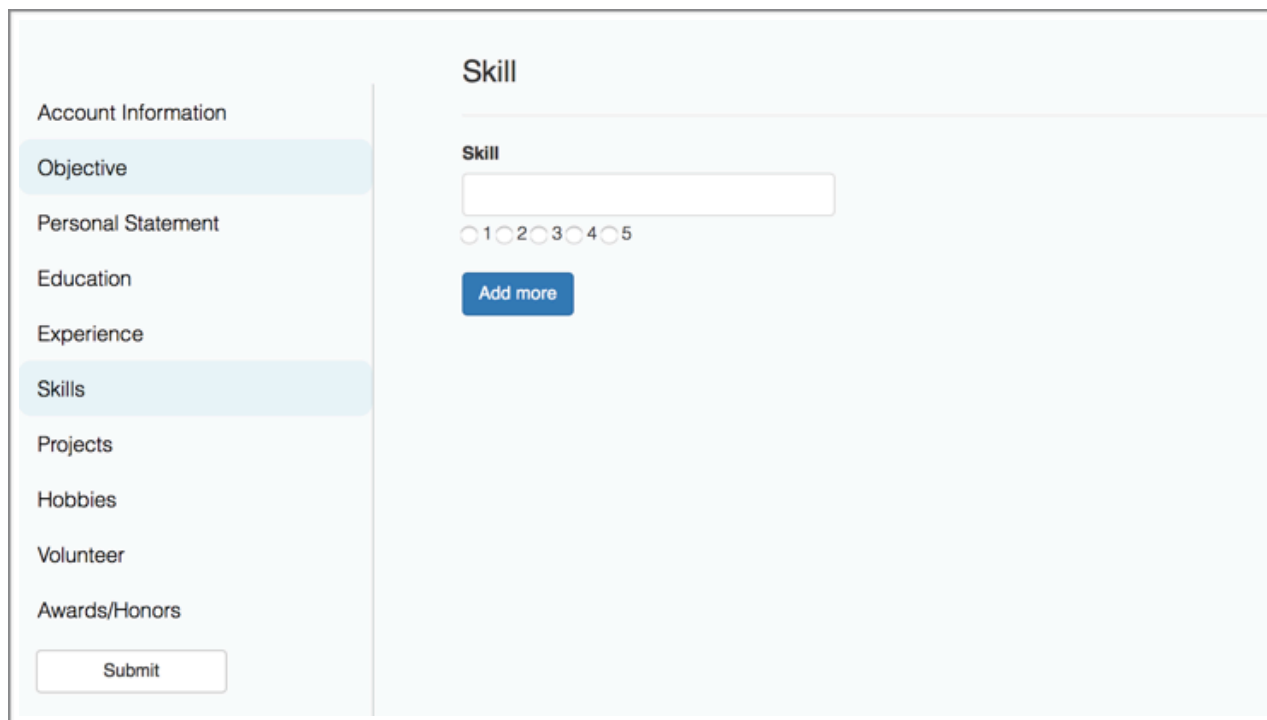
Add more

Figure 5.5-4 Education history form



The 'Experience' form features a left-hand navigation menu with the following items: Account Information, Objective, Personal Statement, Education, Experience (highlighted), Skills, Projects, Hobbies, Volunteer, and Awards/Honors. A 'Submit' button is located at the bottom of this menu. The main content area is titled 'Experience' and contains the following fields: 'Company' (text input), 'position' (text input), 'Job Description' (large text area), 'Year start' (text input with '(optional)' placeholder), and 'Year end' (text input with '(optional)' placeholder). A blue 'Add more' button is positioned below the 'Year end' field.

Figure 5.5-5 Experience history form



The 'Skill' form features a left-hand navigation menu with the following items: Account Information, Objective, Personal Statement, Education, Experience, Skills (highlighted), Projects, Hobbies, Volunteer, and Awards/Honors. A 'Submit' button is located at the bottom of this menu. The main content area is titled 'Skill' and contains the following fields: 'Skill' (text input), a rating scale with radio buttons for 1, 2, 3, 4, and 5, and a blue 'Add more' button.

Figure 5.5-6 Skill proficiency form

Project

Project title

Organization

Role

Description

Year start (optional)

Year end (optional)

Add more

Figure 5.5-7 Project history form

Hobbies

Hobbies

1 2 3 4 5

Add more

Figure 5.5-8 Hobbies form

Volunteer

Organization

Position

Description

Year start

Year end

[Add more](#)

Figure 5.5-9 Volunteer history form

Awards

Honors title

Administer

Year received

[Add more](#)

Figure 5.5-10 Awards and honors form

VI. ACCOUNT HOMEPAGE

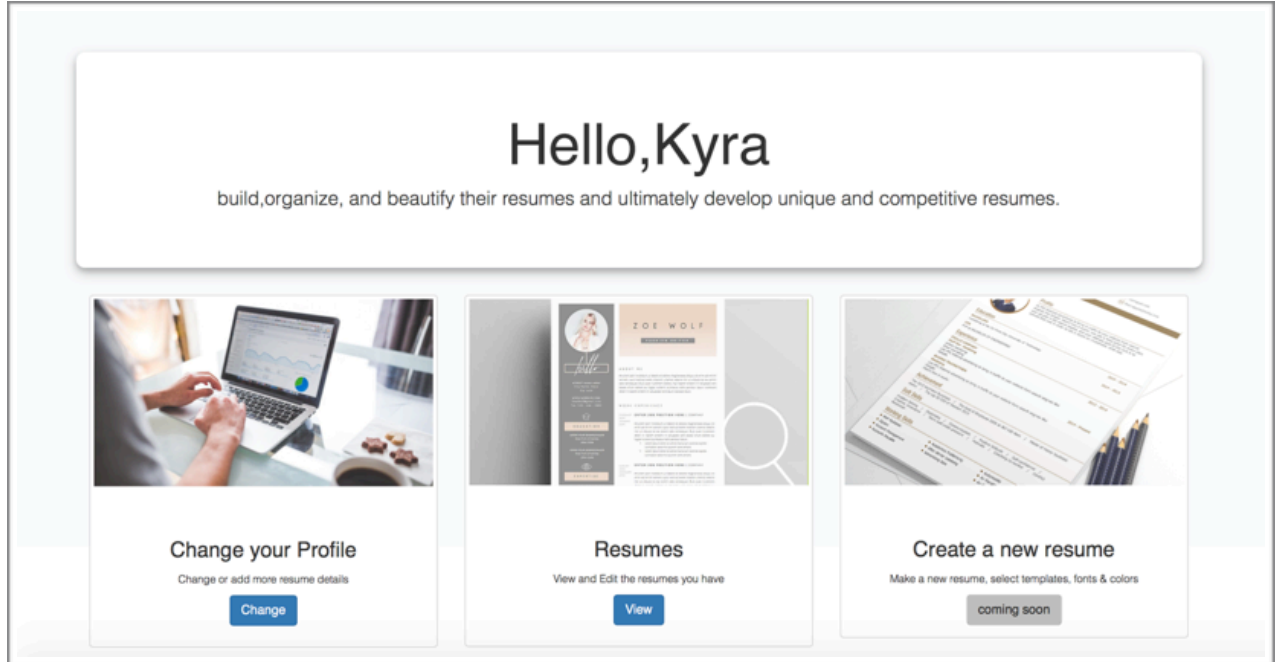


Figure 5.6-1 Account homepage where users can update information and edit resumes

VII. RESUME BUILDER

Kyra Wayne
Phone: 13609080831 Email: kwayne@scu.edu Location: Santa Clara, CA

Skills

Three pie charts showing skill proficiency in various technologies:

- Chart 1: Jap..., CSS, HTML, iMovie, Web..., iIust...
- Chart 2: Adobe, Phot..., Micr..., JS, MyS..., PHP, C
- Chart 3: Ruby, iDe..., C#, Swift, Autb..., C++

Education

Institution	Program	Start	End
Santa Clara University	Web Design Engineering	Jan 2014	Jul 2015
University of Melbourne	Engineering Exchange Program	Jan 2015	Jul 2016

Projects

Senior Design, Santa Clara University
Database Engineer, Web Engineer January, 2016 - Present

Experience

Company	Position	Start	End
SCU Communication...	Web Developer & Project Manager	Jan 2016	Present

Figure 5.7-1 Resume editor for users to modify the styling of their resumes

CHAPTER 6 - TECHNOLOGIES USED

I. HTML

Markup language for defining the structure of our web application.

II. CSS

Stylesheet language used to determine the styling and behavior of HTML elements.

III. BOOTSTRAP

Bootstrap is a framework for HTML/CSS/Javascript that will save our team from doing some of the basic organizational CSS.

IV. JAVASCRIPT/JQUERY

We will use Javascript and jQuery for event listeners to change the interface of an infographic resume in real time.

V. AJAX

Ajax will be used as a client side script to communicate with the database and server. We will use it as a method to updating parts of the webpage.

VI. SVG

Partnered with JavaScript, we can use scalable vector graphics that can change size based on the user preferences without losing their original quality.

VII. LINKEDIN SDK/REST API

Secure software development kit that will allow our application to gain access to user's basic profile data for efficient reuse of information.

VIII. GITHUB

Version control site for our team to utilize in development.

IX. GOOGLE CHARTS

Embeddable charts and graphs that the system can use in resumes to create dynamic visuals.

X. BROWSERSTACK

A useful online tool that simulates different browser dimensions and settings so that our development team can verify that our application is responsive and accessible.

XI. PHP

Server-side scripting language that can be used to access and send pull requests to a database.

XII. MYSQL

Relational database management system where users' resume and account information will be stored.

CHAPTER 7 - ARCHITECTURAL DIAGRAM

Users will send an HTTP request to access our webpage, and be able to login through the LinkedIn SDK and access the front-end HTML and CSS. JavaScript event listeners will alter the front-end based on the user's modifications to his or her resume templates. The system will use PHP to connect to a backend server which stores his or her resume settings and profile information so that his or her profile can be reloaded upon login.

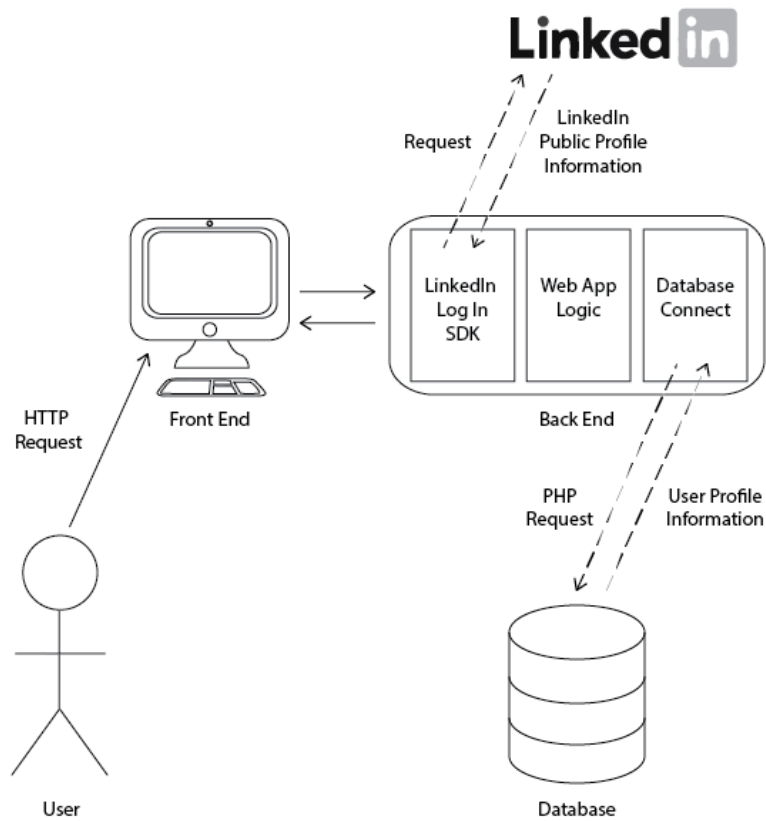


Figure 7-1 Architectural diagram

CHAPTER 8 - DESIGN RATIONALE

Our website has been constructed to emanate an aesthetically-pleasing and easily-usable experience. It will be laid out in a simple format in order to allow the user to navigate the website easily and efficiently.

The website first displays an overview of the necessary steps to be followed in order to build a successful and alluring infographic resume. This will help the user gain a full understanding of the website's functions. Next, the user is directed to the account tab in order to begin the process. We placed the account tab at the top of the screen in the static navigation bar, so that the user can access this button at all times.

The account details page contains a simple form layout for the process of filling in the user's resume details. The user also has the option to link his or her account to his or her pre-existing LinkedIn account so that it will automatically input the information needed; this aids in quickening the resume building process.

Finally we provide the user with several color schemes and templates, which will help to guide them in the process. This asset will specifically aid those users who are not as artistically inclined.

The implementation of this website on the front end is programmed using the HTML, CSS, JavaScript and PHP languages. We use SVGs and Google Charts to create infographics, since their vector-based qualities allow them to change their size without losing any resolution. The PDO extension of PHP is used to communicate with the MySQL database in the backend. These languages are a straightforward approach to creating a website embedded with a form.

CHAPTER 9 - TESTING

For this system, we have carried out numerous trials of white-box and black-box testing. We have both hard-coded information into the database using phpMyAdmin to measure how well the resume builder handles changing, adding, or removing data at any time. We have also done this as a typical user would: by changing, adding, or removing information via the Account Details forms. We have also tested our LinkedIn portal by logging into pre-existing LinkedIn accounts to see how the information is placed into our forms and database.

Moving forward, our team plans to practice stress testing and beta testing by utilizing our connections with other engineering students, professors, and the career center on the Santa Clara University campus. This will help us determine the amount of information that our database can handle, as well as whether people outside of our team can easily utilize and navigate our system. We would also like to meet with recruiters to show samples of users' completed infographic resumes to gauge whether the resumes created with our system would be successful in catching a recruiter's attention and the likelihood of that user being hired.

CHAPTER 10 - FUTURE FEATURES

Our future features will include a larger gallery of graphics and templates, so that users can effortlessly design resumes that match the different format criteria for various occupations. Also, there will be an option to customize a resume without any layout to allow for complete user control. Due to the added options for resumes, we will also need to build a system to save and create new resumes, and edit or remove existing resumes. In addition, we would like to add a read-only portal for employers, so that users can supply a link to their online resume for employers to interact with. We will continue to work together as a team to further the advancement of our application.

CHAPTER 11 - CONCLUSION

Throughout this process, our team has learned the value of delegation and the value of creating a more conservative timeline. When dividing up tasks as a team we had to pay attention to each member's strengths in order to complete aspects of our system efficiently; otherwise, it would be easy for our team to each work on the same thing: the design aspect of our system. Due to the system's complex back-end though, we had to assign one teammate to focus on styling and drive the others to work on the code. Furthermore, we learned the importance of a conservative timeline since it is common for unexpected delays to occur. When we were behind schedule, we learned to compromise and remain flexible in order to catch ourselves back up.

We are very happy with the results of our system, since it is both functioning and aesthetically pleasing. We plan to continue working on this project so that it can have more options for customization and include a read-only portal.

BIBLIOGRAPHY

Attia, Amir. "Project Reader: Website Graphic Design." Series of personal interviews.

Our team has selected Professor Amir Attia from the Arts & Art History Department to be our project reader because of his remarkable design skills and willingness to critique our work until it has reached perfection. We will be utilizing his expertise when creating the infographics and design elements of the web application's interface. He will also be supplying his own ideas during the design process and introducing us to material about current design trends, color theory, and font matching.

Career Center. Guide. Santa Clara: Santa Clara University, 2016. PDF.

During the interview with Meghan Cress, Cress showed us the Santa Clara University Career Center's resume guide, which is a short PDF file about the steps in creating a successful resume and a personal brand. A large part of this project is to show the user's personality through their infographic resume, so this guide will help our team with tips on how to achieve that. For example, the guide supplies visual examples and formatting restrictions, which we can implement into our system so that user's do not unknowingly create bad resumes.

Cress, Meghan. "Regarding the Modern Resume: What Works and What Doesn't." Personal interview. 14 Nov. 2016.

On November 14, our team scheduled an interview with one of the most highly-recommended employees of the Santa Clara University Career Center, Meghan Cress, to ask her questions regarding trends in resumes, the do's and don't's of using graphics in resumes, as well as the formatting of resumes to appeal to recruiters in different fields of work. As a former recruiter herself, Cress' insights were invaluable. Cress will also be a valuable resource moving forward,

since she has agreed to collaborate with our team to solicit beta testers in the career center and to create an online link invitation through the career center site to our web application.

Fielding, Jonathan. "Introduction to Responsive Design." *Beginning Responsive Web Design with HTML5 and CSS3* (2014): 1-33. Web.

The main goal of the article is to explore the scope of responsive web design when using optimization techniques with HTML and CSS. In the article, the author discusses the increasing popularity of smartphones, tablets, and laptops, which in turn has created the need for responsive web design. This article is useful since it also supplies practical examples of optimal user experiences on various platforms. Our team recognizes that in order to make our application accessible it is helpful to build a responsive design, which will ultimately help us to improve the overall user experience of our system.

Google. "Using Google Charts." *Google Charts*. Google Developers, 26 May 2015. Web. 28 Nov. 2016.

For our system we will be using Google Charts to create dynamic graphics, graphs, and charts that can be modified automatically when a user updates his or her information. We have chosen Google Charts specifically since their graphics will look clean and be easily understood to any employers viewing our user's resumes. This is why Google Charts' documentation will be useful for our team to implement this feature as well as to troubleshoot any future issues that may arise.

Harrison, Lane, Katharina Reinecke, and Remco Chang. "Infographic Aesthetics." *Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems*. - CHI (2015). n. pag. Web.

This article mainly argues that aesthetics in visualization and infographics relate to the desirable outcome of engagement and memorability. Mostly importantly, it talks about how age, gender

and education level influence a user's preferences in degrees of colorfulness and complexity. By using the information provided in this article, we can design and suggest different color themes for our resume templates based on the user's background. This article thus helps us to further personalize our system and potentially increase customer satisfaction.

LinkedIn. "Sign In with LinkedIn." LinkedIn Developers. LinkedIn Documentation, 2016. Web. 11 Nov. 2016.

For our system we will be using the LinkedIn Software Development Kit (SDK) to implement a "Log In through LinkedIn" feature in order to attract more users. This is a good feature to implement since it will encourage users to integrate their two accounts as well as save them time in entering personal and work history information. This is why LinkedIn SDK's documentation will be useful for our team to implement this feature as well as to troubleshoot any future issues that may arise.

Lucca, Giuseppe A. Di, and Anna Rita Fasolino. "Web Application Testing." Web Engineering (2006): 219-60. Web.

This article summarizes the differences between web applications and traditional software systems, as well as the necessary techniques in order to test web applications. Web testing, in simple terms, is checking the web application for potential bugs before it is published to the public, or before the code is pushed forward into production. It is a necessary step in finalizing our system. Suitable methods and techniques have to be defined and used to test web applications effectively. The article discusses several testing technologies for both functional and nonfunctional elements, and it provides us with step-by-step testing methods to verify whether the system is built correctly.

The Muse. "Recruiters Tell Us: Do Resume Fads Really Work?" Forbes. Forbes Magazine, 12 May 2012. Web. 25 Nov. 2016.

The Muse is a contributor to Forbes magazine, a highly reputable business magazine that millions of people refer to when making business decisions. This article, though an opinion piece, is a useful resource in addition to the interview with Meghan Cress since it supplies the valuable opinions of recruiters who look at resumes daily, particularly in regard to resume fads, like the infographic resume. This article supplies helpful tips on the do's and don't's of resume building and will help our team to steer clear from creating visually-cluttered resumes and to create resumes that are organized to appeal to different employers.

Palmer, Jonathan W. "Web Site Usability, Design, and Performance Metrics." Information Systems Research 13.2 (2002): 151-67. Web.

This research article reports on a series of studies that develop and validate web site usability, design, performance metrics, and responsiveness. As a result, the author suggests that the success of a website is significantly associated with its download delay, navigation accessibility, content, interactivity, and responsiveness. Since our application is a web-based program, we will need to build the website based on this article's suggestions regarding display rate, layout design, and the optimization of customizability and interactivity. After we finish building the system, we can refer to this article and check if the website satisfies this criteria.

Refsnes Data. "The World's Largest Web Developer Site." W3Schools Online Web Tutorials. Refsnes Data, 1998. Web. 28 Nov. 2016.

W3Schools, as the title suggests, is the world's largest web developer site. It contains hundreds of simple tutorials on tools like HTML, CSS, Javascript, Bootstrap, jQuery, PHP, ASP, XML, SQL, AngularJS, and more. Our team will be using several of these technologies to create the best quality web app possible (refer to Technologies Used). This is why W3Schools will be useful for our team to implement these elements as well as to troubleshoot any future issues that may arise.

Santa Clara University. "Resumes - Job Prep Toolkit." SCU Career Center. Career Center, 2016.
Web. 14 Nov. 2016.

Similar to the Guide PDF file that was given to our team by Meghan Cress, we were referred to the Santa Clara University Career Center site as a resource for resume preparation. This site has resumes for the less-experienced undergraduate student, the experienced or non-experienced graduate student, and even some samples from Santa Clara University alumni. Just as Meghan Cress has recommended, these sample resumes are formatted differently depending on the kind of work that the student is looking for. Thus, these samples will help us in customizing the user's resumes to best match their needs.

Steichen, Ben. "Project Advisor: Web App Development." Series of personal interviews.

For this project our team has chosen Professor Ben Steichen of the Computer Engineering and Web Design Engineering department to assist us in user interface and back-end application development. He is an expert in UI design and general web development, and he will supply our team with advice and be of assistance to us in person when other online sources are not supplying us the answers we need. He will also give an unbiased perspective when looking at the responsiveness and usability of our web application so that we can create an app with the best quality possible.

Steinfeld, Trudy. "The Only Resume Advice You'll Ever Need." Forbes. Forbes Magazine, 6
June 2012. Web. 25 Nov. 2016.

Trudy Seinfeld is the Associate Vice President/Executive Director of Career Development at New York University, where she has gained extensive experience in the field of career services. Like the "Resume Fads" opinion piece, this article was published by Forbes, a reputable business magazine. Seinfeld gives a list of things to avoid like clutter, using an objective statement, or

complicated font styles. She also offers simple tips on organization. We will be referring to this list in the design process of our web app to make sure that it meets the given criteria.

“User Management Tools and Login Controls for Forms Authentication.” Pro ASP.NET 2.0
Website Programming (n.d.): 151-210. Web.

This article discusses the new user-management tool and features in ASP.NET 2.0, which can significantly reduce the time for developing login forms and user administration sections. ASP.NET is an open source web framework for building modern web applications and services. With ASP.NET, web developers can quickly create web sites with HTML, CSS and JavaScript, scale them to millions of users and easily add more complex features. This article introduces how to use the new Membership and Roles features and how to easily access common user and role functions. For our project, there will be login forms and a database that records user information. This article introduces us to a tool that can save us time on the project. With ASP.NET 2.0, we don't have to code the user section from scratch.

Yasuda, Kouhei, Shigeo Takahashi, and Hsiang-Yun Wu. “Enhancing Infographics Based on Symmetry Saliency.” Proceedings of the 9th International Symposium on Visual Information Communication and Interaction - VINCI (2016): n. pag. Web.

This article summarizes the benefits of visual and infographic elements. The authors provide several statistics from a user study that demonstrate how infographic data can improve the readability of information and can effectively attract visual attention to intended regions of interest. By referring to this article on our tutorial page, we can prove the advantage of infographic resumes and to gain higher conversion rates, or in other words, increase the number of users who visit our site and actually make accounts.