

Career Fair Recruiting App



What Problem are we Solving?

- Current recruiting process is laborious and manual
- Easy-to-use applicant management system to use at career fairs
- Automatic information parsing from resume
- Automatic application creation on company database
- Ability to attach notes onto application gained from in-person interactions with recruiter

How do we plan on solving this?

- Mobile Application
 - Allows recruiters to:
 - Take a picture of the applicant's resume
 - Create an application using that image
 - Write notes on applicant
 - Send resume to company's database

Goal: Help increase application efficiency for recruiters at events including career fairs and mixers by providing a easily accessible and portable solution

Technologies

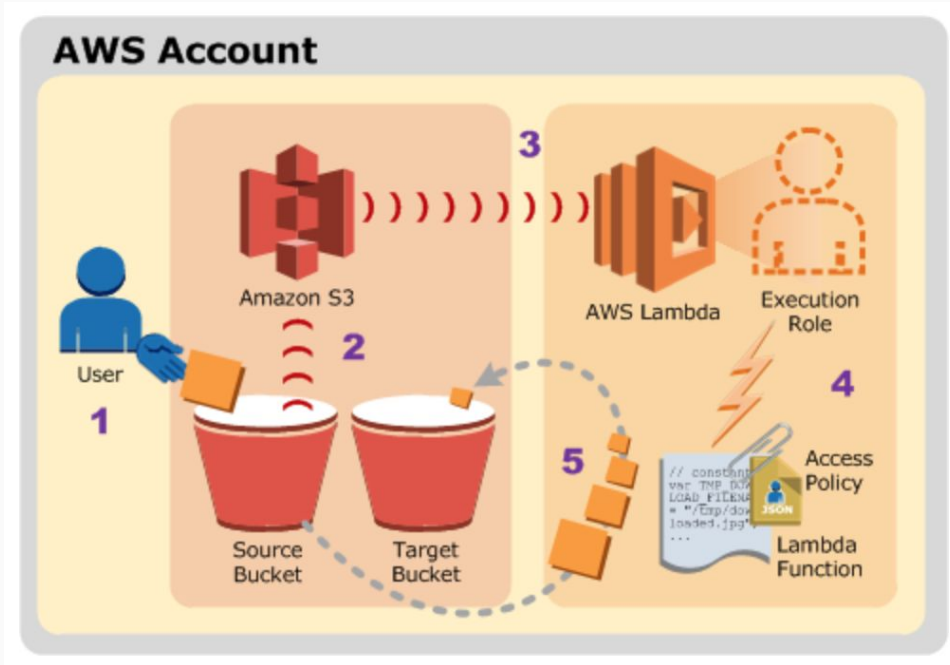
- Tesseract
 - Open Source OCR Engine
 - OCR - Optical Character Recognition
 - Advantages:
 - A lot of documentation online
 - Disadvantages:
 - Resumes have different formats
 - Entire resumes may contains lines or other non-alphanumeric characters

Solution: Image Processing - pre-process image before sending the image to Tesseract

Backend

- Gateway API -> S3 -> Lambda
 - API calls from front end to store image in S3
 - Lambda function triggered from S3 to parse image
 - Store result back into S3
- Use Tesseract (OCR) to convert image into text
- Use custom image processing to yield better result when using Tesseract
- App uses API calls to access processed resume information or resume photo

Backend



Tesseract Technology and Innovation

- Main goal of back end is to obtain text from resume
- Translating resume picture into text is hard
 - Google's open source software Tesseract
 - Open source Computer Vision library OpenCV
- Document parsing still an active area of research

Full Document Tesseract

IAN LIM CHEE HIAN

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EDUCATION

Univ. of California, Santa Barbara, College of Engineering Sep 2012 – June 2016 (Expected)
Bachelor of Science, Mechanical Engineering
(Sponsored under the Ministry of Education, Brunei Overseas Scholarship Programme)

Senior Capstone Project Fall 2015 - Present
Thermal Heat Sink Attachment, Northrop Grumman Corporation

- Working with Northrop Grumman to design a reattachable thermal heat sink interface to be used in space
- Machined a prototype and ran outgassing, thermal stress and resistance tests to see if it would survive in space
- Presented two design reviews as well as weekly updates to a panel of faculty members and industry partners

PROFESSIONAL EXPERIENCE

Berakas Power Management Company SDN BHD Brunei Darussalam
Intern, Electrical and Electronic Manufacturing Company Aug 2015 – Sep 2015

- Shadowed and assisted a senior projects engineer responsible for the design and construction of overhead transmission lines throughout the country
- Oversaw and tracked the progress on the erection and stringing of over 100 transmission poles and towers
- Enforced and promoted national health, safety and environmental standards to ensure a safe work environment

Sepakat Setia Perunding SDN BHD, Brunei Branch Brunei Darussalam
Intern, Local Consulting Engineering Firm Jul 2013 – Aug 2013

- Shadowed and assisted a senior engineer who finalized engineering proposals and held business meetings
- Calculated the power required for HVAC units to maintain a cool temperature in different rooms and buildings
- Studied hundreds of engineering drawings and familiarized myself with engineering symbols and codes

CLUB ACTIVITIES AND VOLUNTEER WORK

Alpha Kappa Psi, Omicron Omega Chapter, UCSB May 2015 – Present

- Organized and executed several fundraising events to raise \$3,500 in two months during pledging
- Presented a business proposal that would benefit both financially and to the community to a panel of judges
- Coordinated and planned both professional and philanthropy events that were attended by over 50 brothers

SB Hacks September 2015- Present

- Plan and organize a 3-day hackathon that will be attended by over 500 programmers from all over California
- Cold-called and e-mailed over 50 companies for potential partnership and sponsorship

UCSB ASME (American Society of Mechanical Engineers) Club September 2013- March 2014

- Volunteered in a committee tasked with rebuilding a local park's water wheel
- Engaged in weekly meetings that included discussing agendas and mini engineering design competitions

UCSB BAJA Racing Club September 2013- December 2013

- Repaired and upgraded an old off-road vehicle's speed and durability to improve overall racing performance
- Redesigned and replaced both the braking and suspension systems that increased performance and durability

ADDITIONAL SKILLS

Languages

- Fluent in Malay and English, Proficient in Chinese (Mandarin and Hokkien)

IT and Engineering Skills

- Engineering Software: MATLAB, SolidWorks Computer Aided Design, LaTeX, Abaqus, COMSOL
- Machine Shop

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Old Result

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New Parsed Result

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Use OpenCV to detect edges of areas on picture with high activity

VICTORIA REED

1 Main Street, New Cityland, CA 91010 | I: (555) 322-7337 example-email@example.com

Summary

Experienced Server bringing enthusiasm, dedication and an exceptional work ethic. Trained in customer service with knowledge of French cuisine. High energy and outgoing with a dedication to positive guest relations. High volume dining, customer service, and cash handling background.

Highlights

- Works well under pressure
- Exceptional interpersonal skills
- Trained in liquor, wine, and food service
- Master of sales techniques
- Food ingredients expert
- Point of Sale (POS) system operation
- California Food Handlers card
- Food safety understanding
- Upbeat, friendly, and positive
- Highly responsible and reliable

Experience

Head Waiter

Châteaux Le Marc — New Cityland, CA

Jan 2011 to Current

- Train new waiters and floor staff on guest service expectations, safety procedures, proper food handling, and restaurant protocols.
- Monitor dining room to ensure optimal guest experiences.
- Work with individual servers to improve performance.
- Answer customer inquiries and resolve issues promptly.
- Schedule wait and floor staff, approve time off, and rework loads as needed.

Waitress

Grand-Père — New Cityland, CA

Feb 2008 to Dec 2010

- Delivered exceptional, friendly, and fast service.
- Answered questions about menu selections and made recommendations when requested.
- Accurately recorded orders and partnered with team members to serve food and beverages that exceeded guests' expectations.
- Skilfully anticipated and addressed guests' service needs.
- Managed closing duties, including restocking items and reconciliation of the cash drawer.

Waitress

Regis on the Balcony — New Cityland, CA

Apr 2006 to Jan 2008

- Assisted guests with making menu choices in an informative and helpful fashion.
- Appropriately suggested additional items to customers to increase restaurant sales.
- Effectively communicated with kitchen staff regarding customer allergies, dietary needs, and other special requests.
- Regularly checked on guests to ensure satisfaction with each food course and beverages.
- Consistently adhered to quality expectations and standards.
- Routinely cleaned table linens, table settings, glassware, windowsills, carpets, counters, floors, storage areas, and service refrigerators.

Using coordinates, visualize into boxes to only separating the whitespaces

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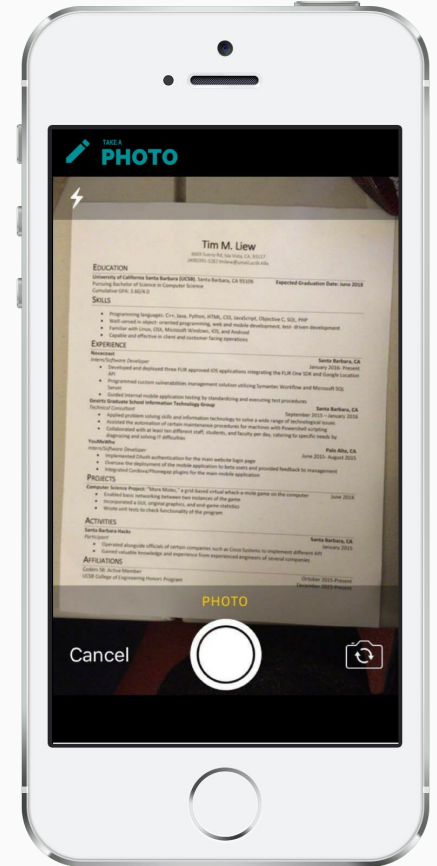
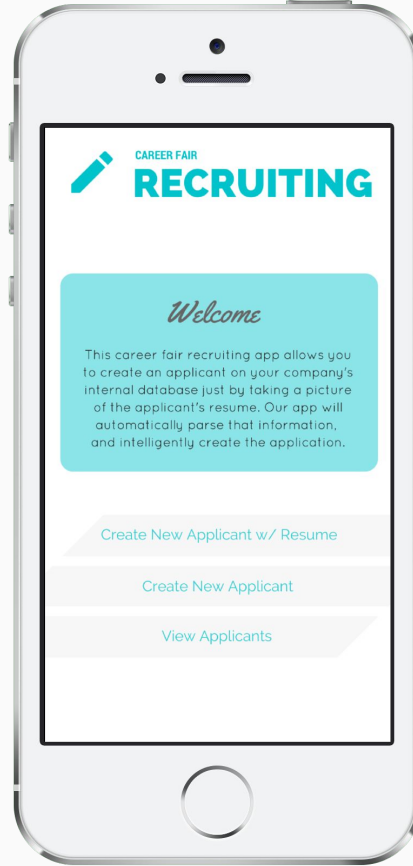
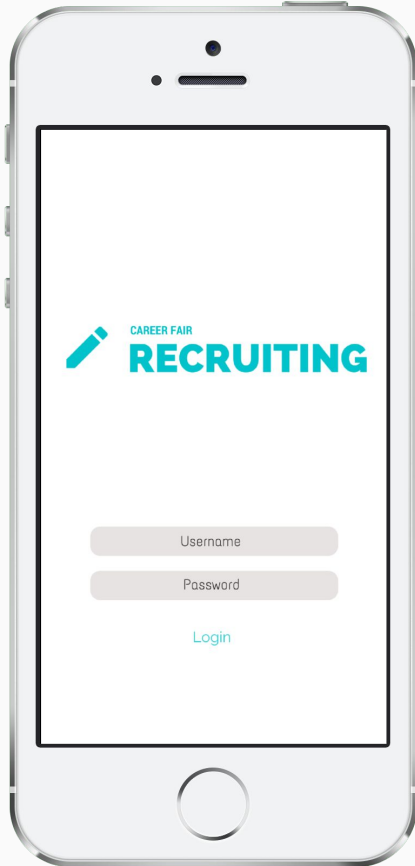
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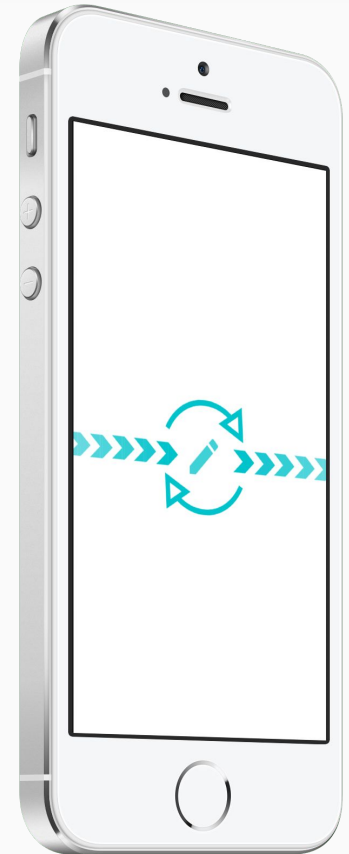
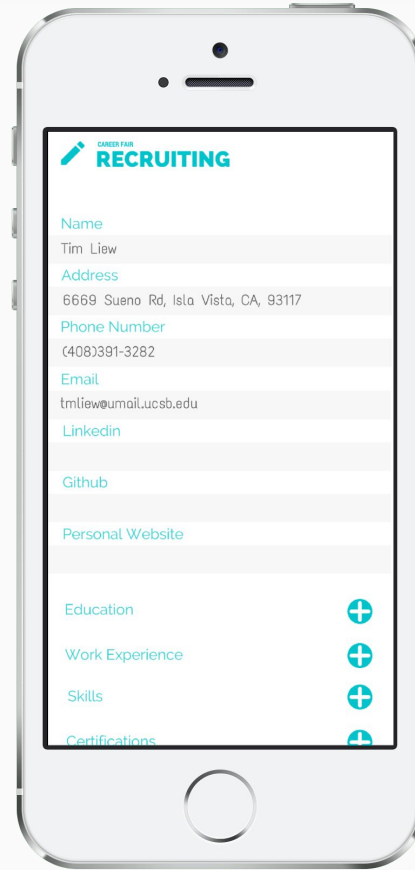
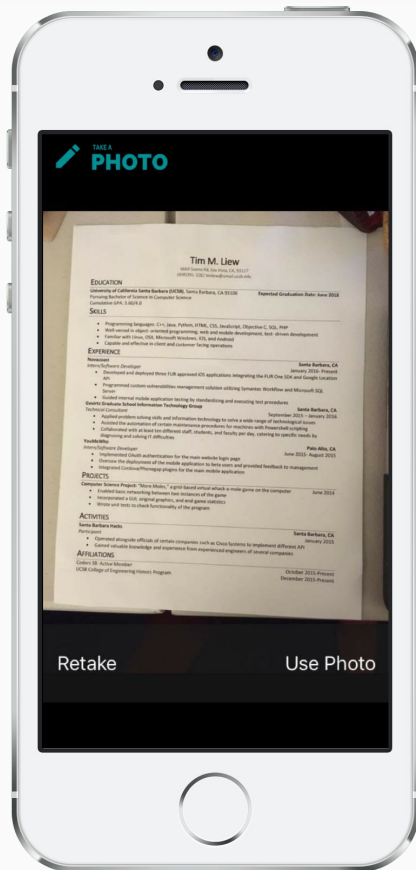
Frontend

- iOS application
- Initial image recognition on client side
- Core information client side parsing
 - Contact information
- Display applicant information
- Send to server side
 - HTTP Requests

Design

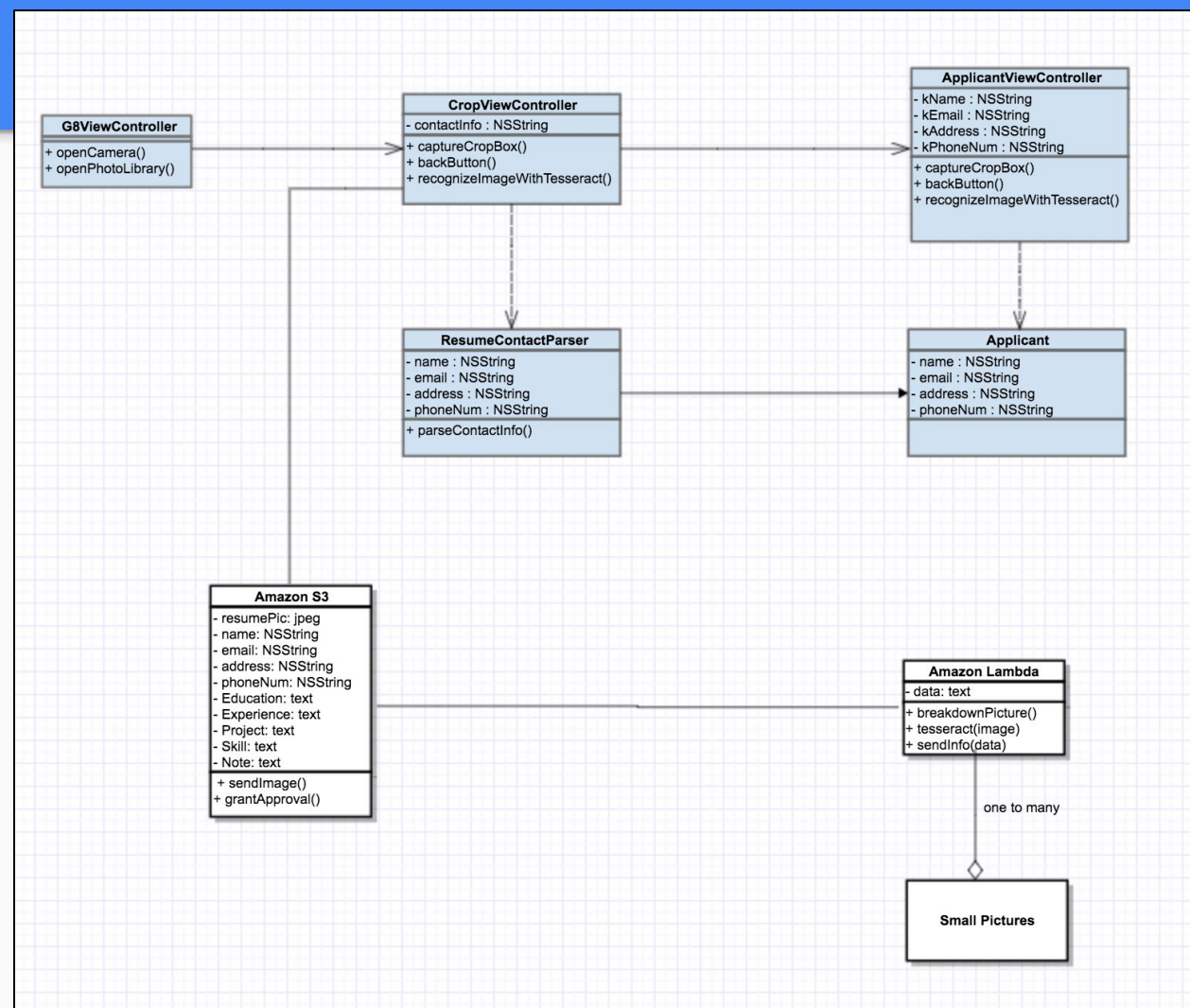


Design



Workflow

- “Dummy” frontend app
 - iOS App pulls and populates fields with data from backend
 - Sends data to server
- Backend
 - Stores data and images
 - Does heavy processing



System Design Choices

- Modularity, Portability, and Efficiency
 - Minimize downtime
 - Allow for future improvement and portability
- iOS App
 - Optimization choice: Some image processing and parsing on frontend
 - Can run independent of backend
- Backend
 - Faster and retains more information, faster on server side
 - All data and most processing is on backend, so portable to different operating systems
 - Android

Demo



Next Steps

- Linking Backend to app
 - HTTP requests
 - Amazon Lambda
- Database for completed applications
 - Amazon S3
 - Workday
- Machine Learning
 - OpenCV
 - Edge detection