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## Greg Ziegan

A young software developer possessing a passion for researching new tech, writing clean, extensible code, and comprehending problems concerning each stage of the development cycle.

### Summary of Qualifications

- Expertise in web and API development, with a foundational understanding of MVC and MVMM design practices.
- Experience with event-based designs, the observer pattern, and the applications of these concepts in the context of Front-End Web, Android and iOS development.
- Ability to work cohesively with a team of software engineers while communicating with clients and/or managerial staff members under an Agile methodology.

### Technical Expertise

(In descending order of expertise)

Languages: Python, Java, Javascript, Common Lisp, Swift, Objective-C, C, C++, SQL  
Frameworks: Django, Flask, Android, iOS, Django REST, Restless, Ember.js, Node.js  
APIs/Libraries: jQuery, nltk, scikit-learn, SQLAlchemy, RxJava  
Systems: OSX, Linux  
Databases: MySQL, Postgres, MongoDB, Realm (mobile)

### Professional Experience

#### Chagrin Falls, OH

#### Software Developer at Vertical Knowledge (May 2013 — Present):

Wrote spiders on a closed-source framework that uses an anonymization network to fetch large amounts of data from retail, government, social media, and various other sites genres. Responsible for the maintenance of recurring spider collections and developing new practices for reverse engineering a website.

- Created a Location comparison system built on top of Django to compare millions of addresses with a multi-threaded algorithm that computes a similarity score based on geographic distance.
- Built a candidate-screening tool that allows the company to view an online examination of technical and nontechnical applicants. Custom exams can be uploaded and candidates take the exam via a unique hyperlink.

- Constructed a tool to check a massive list of usernames against a potentially large number of websites and export a report showing whether the usernames possess a status of valid, invalid, forbidden, etc. on each site.
- A web application that creates single-page advocacy websites with a simple single-page form.
- Built a single page app to facilitate the manual extraction of data from PDFs and free text HTML documents.
- Developed ad recognition software. We wanted to automate the process of matching advertisements with the corresponding company. The process is given a large set of image data and detects color and spatial features with the SLIC clustering algorithm. The produced segmented images are used to train a Support Vector Machine. The SVM was then able to predict the associated company with a given ad image with 95% accuracy.
- Research involving a generic business information parser, which would potentially parse relevant information about a business across unknown page formats.

### **Side Projects**

- Wrote a website (<http://botterdre.com>) that generates randomized lyrics to songs by spidering lyrics.com and using an algorithm to produce a new song using grammar rules established in a python script.
- Wrote a private website (<http://vbjexchange.com>) that simulates a primitive trading network based on a joke currency between college friends.
- Anovelmous:
  - Have begun development on a multi-platform application: Web, iOS, & Android.
  - Collaborating with 4 other friends and colleagues.
  - The premise is to facilitate a collaborative novel determined by the most popular user submitted words with a series of short voting windows.
  - The app utilizes strict grammar rules defined by a natural language processing library to aid in the novel's readability.

### **Education**

Case Western Reserve University, Cleveland, OH  
 B.S. in Computer Science Candidate  
 Expected Graduation: December 2015

### **References**

*Ross Salupo*: current CTO at Vertical Knowledge.  
 Email: [ross.salupo@vertical-knowledge.com](mailto:ross.salupo@vertical-knowledge.com)

*Jon Sustar*: former senior software engineer at Vertical Knowledge.  
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