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Executive Summary

Summary: Back-end Python engineer with experience in creating and implementing scalable solutions in RESTful API design, web-crawling, data processing/analytics pipelines, database schemas, analytics and search.

Experience

Spring 2009 - February 2016 **Systems and architecture Engineer**, *Parse.ly*, New York, NY.

- Designed and created an API for our publishers to access their analytics and recommendations data. The API powers multiple live dashboards and widgets. It serves on average 500 requests per second and peaks up to 1000-1500 requests per second. The documentation for the API is here: https://www.parsely.com/docs/api/overview/endpoint.html . Technologies used: Tornado, Redis, MongoDB, ElasticSearch, Cassandra.
- Designed and created crawling system that processes millions of URLS per month. Crawlers collect informative metadata from publishers' page for display on the analytics dashboard. Technologies used: Scrapy, MongoDB, Redis.
- Implemented several features in our real-time and batch analytics pipeline that processes up to 10M events per day. Technologies used: MapReduce, Pig, Spark, Storm, ElasticSearch, Cassandra.
- Designed and implemented flexible auto-complete search for our dashboard analytics users. With this feature, users were able to search millions of titles, authors and sections in a unified way and obtained results within 200ms.
- Automated configuration and deployment for machines that were used to do API, crawling or search work using Chef and Vagrant.
- Designed and developed named entity recognition system using Solr, the Wikipedia index, Wikipedia traffic data, and NLTK.
- Wrote and launch the back-end prototype to the Parse.ly reader, an RSS feed reader that displays articles from the web based on a user's interests, using Django and Solr.

Winter 2007 - Spring 2008 **Senior Python contractor**, *Wordstream*, Boston, MA.

- Designed and implemented a keyword-matching algorithm that accepts documents as its input and produces a list of suggested hyperlinks to be added by a user. The suggested keywords are based on the user's profile data.

2007 - 2008 **Software Engineer**, *Intelligent Information Systems*, Durham, NC.

- Helped design and implement a web application that allows some North Carolina counties to handle and process appeals related to taxes on property made by residents of these counties using C#, ASP.NET, MS SQL and Javascript
- Designed and implemented a website so clients could could access and browse property inspection information
- Implemented and improved a procedure to port and test programs written in VB6 to VB.NET. Converted over 100 programs written in VB6 code to VB.NET using a combination of the MS conversion tool and the Python scripting language.

Education

Fall 2006 - Winter 2008 **MS Applied Mathematics, North Carolina State University**, *Raleigh, NC.*

Fall 2001 - Winter 2006 **BS Computer Science, North Carolina State University**, *Raleigh, NC.*

Fall 2001 - Winter 2006 **BS Applied Mathematics, North Carolina State University**, *Raleigh, NC.*

Extra

- Presenter,PyData: "Wikipedia Indexing and Analysis" - see https://vimeo.com/53091620
- Contributor to open source projects - see https://github.com/dfdeshom