

T.J. Trimble

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Experience

FirstRain, Inc.

Natural Language Processing Engineer

SAN MATEO, CALIFORNIA
April, 2015 - October, 2016

- **Information Extraction:** Owned and improved an Information Extraction engine processing thousands of documents every day, using Stanford's TokensRegex system.
 - Wrote new rule-based logic for named entity linking, sentence selection, and duplicate detection.
 - Cut the pre-existing processing time by 75% by improving algorithmic efficiency and optimizing REST requests.
 - Improved type safety and organization of the code.
 - Maintained production Java code, fixing precision and recall bugs as reported, working directly with dev-ops, the front end team, and customers to debug, fix, and push development and deployment enhancements to production.
 - **Entity Linking:** Designed, developed, and deployed a system matching named entities with topics.
 - Utilized the Stanford Dependency Parser to extract robust semantic relationships between topic substrings and company substrings efficiently.
 - Developed content analytics to extract relationship scores between entities over millions of sentences, such as textual proximity and rule based filtering.
 - Extracted textual references to companies and organizations in documents utilizing linguistics and world knowledge.
 - Optimized Java code within an Apache Storm-like real time document processing engine, analyzing 100,000 documents per day.
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Open Source Projects

Adjectives in the LinGO Grammar Matrix

Master's Thesis & Project

Supervisor: Professor Emily Bender • trimblet.com/thesis • delph-in.net/matrix/customize

Extended the Grammar Matrix, an open source grammar engineering project using HPSG, to enable the morphological, syntactic, and semantic analysis of adjectives cross-linguistically.

- Extended and added new features to an online grammar customization system using Python and JavaScript for starter natural language HPSG-style grammars.
- Extended a server-side grammar customization library in Python to produce machine readable grammatical description of adjectival lexemes, inflection, and agreement.

Additional projects and code at trimblet.com

Education

University of Washington

Master of Science, Computational Linguistics

SEATTLE, WASHINGTON
December, 2014

- **Natural Language Processing** • tokenization, POS tagging, chunking, parsing, word sense disambiguation, sentiment analysis, coreference resolution, *etc.* using FSA/FSTs, CKY, *etc.*
 - **Machine Learning** • classification, clustering, and sequence labeling using Neural Networks (CNN, RNN, *etc.*), Naïve Bayes, MaxEnt, K-means, *etc.*
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Skills

Programming Languages: Java • Python • JavaScript/jQuery • PHP • Groovy • Bash

NLP/Machine Learning Software Packages: Stanford CoreNLP • MALLET machine learning tools • NLTK natural language processing tools • NumPy/SciPy

Software Packages: Git • SVN • Maven • JUnit, Python unittest • Solr • SQL • Django • Java Servlet / JSPs • jQuery

Natural languages: English (*Native*) • French (*Beginner-Intermediate*) • Italian (*Beginner*) • Japanese (*Beginner*)