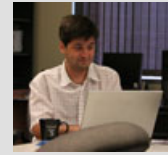


Abe Kazemzadeh, NLP Computer Scientist

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Professional Experience

- Summer 2017 - NLP Data Scientist**, KPMG, Supervisor: John Lee
Fall 2017: Designed and taught an internal natural language processing training course with interactive, cross-platform exercises using SpaCy, Docker, and Git.
Adapted an internal library to use SpaCy annotation info for tokenization, part of speech tags, named entities, sentence splits, and dependency parses.
- Spring 2016 - NLP Programmer**, Alexandria Investment Research and Technology, Supervisor: Ruey-Long Hsiao
Summer 2017: Developed a market impact score using regression on text features of Dow Newswire stories, Solr Cloud full-text search interface, commodity news event classifier, and named entity recognizer.
Performed operational tasks, including installation of Solr Cloud, Cassandra, and Spark, task automation with Fabric, monitoring and alerting with Nagios, user account management in Linux and MySQL, and a migration to Google Cloud Platform.
- Fall 2014 - R&D/Data Science Computer Scientist**, Vixlet, LLC., Supervisor: Barbara Saunders
Spring 2016: Measured and produced a dashboard and reports for user metrics using Python, R, Postgres/PipelineDB, MongoDB, and Systemd on Amazon Web Services.
Designed and implemented chatbots for tennis trivia and to query user passions using Python and Docker.
Prototyped biometric login using computer vision using Python, OpenCV, Caffe, CudaNN, and Cordova.
- Fall 2013 - Fall 2014: Senior Software Engineer**, Adly, Inc., Supervisor: Kim Scheibel
2014: Designed and implemented a machine-learning system for characterizing the demographics of followers of large Twitter accounts based on natural language processing of tweets and profile information, using Scikit-learn, Numpy, and Django.
Implemented scalable, reliable, distributed systems for processing big data streams and web services using Docker and Amazon Web Services (Kinesis, DynamoDB, SQS, and S3).
- Fall 2012 - Fall 2013: Chief Technology Officer**, Annenberg Innovation Lab (AIL), University of Southern California School for Communications and Journalism, Supervisor: Jonathan Taplin
2013: Designed, implemented, and managed real-time social media analysis systems for news and entertainment that included live Mechanical Turk annotation.
Interfaced with AIL staff, students, sponsors and collaborators on technical aspects of projects including programming, website design, computing infrastructure, technology transfer and open source strategies, power consumption, privacy, press releases, and internal communication.
- Fall 2002 - Fall 2012: Research Assistant**, University of Southern California, SAIL Lab, Supervisor: Shrikanth Narayanan
2012: Created applications for natural language human-computer interaction and managed large scale data collection, annotation, storage, and analysis.
Developed speech processing techniques for child literacy assessment that were used in LA Unified school district.
Developed methods for recognizing emotion in text that were applied to Twitter discussion of the 2012 US Presidential elections and Oscar movies.
Developed VXML telephony applications for dialogs in English and Spanish for autism outreach.

- 2009 - 2010:** **Speech Recognition Audio Engineer**, Alelo Tactical Language Training, Science Team, Supervisor: Kevin Perry
 Developed multilingual speech processing techniques used for language training and assessment of NATO peacekeeping and humanitarian forces.
 Developed speech recognition testing and data warehousing framework for speech interaction data in Arabic, Dari, French, Indonesian, and Pashto.
- Summer 2008:** **Research Intern**, AT&T Shannon Laboratory (Florham Park, NJ), Speech Processing Division, Supervisor: Michael Johnston
 Utilized social network structure for speech recognition grammar rescoring for a mobile, movies-on-demand application which resulted in a patent (USPTO #20160085506).
- Summer 2007:** **C++ Programmer**, C++ Library for Audio and Music (CLAM) Project, Google Summer of Code, Advisor: Xavier Amatriain
 Programmed vowel synthesis capabilities into an open-source C++/Qt sound library using a 2D control surface for the vowel space.
- Summers 2002, 2004:** **Research Assistant**, USC Institute for Creative Technologies (ICT), Supervisor: Andrew Gordon
 Designed finite state machines to match the colloquial language used to express theory of mind concepts.
- Summer 2001:** **English Teacher in Shanghai**, Boren Scholar Study Abroad Program
 Developed lessons and taught English as a second language for students of all ages.

Education

- 2013:** Ph.D. in Computer Science, University of Southern California
2005: M.S. in Computational Linguistics, University of Southern California
2002: B.A. in Linguistics, Natural Science Minor, University of Southern California
Add'l Coursework: Huadong Shifan Daxue (Shanghai, China), University of Minnesota (Minneapolis, MN), and University of Wisconsin Eau Claire (Eau Claire, WI)

Human Language Competence

- Native:** English
Fluent: Spanish (Latin American and Iberian)
Intermediate: Mandarin Chinese
Limited (work/travel): Indonesian, Farsi, French

Artificial Language Competence

- Advanced:** Python, R, Bash, Perl5/CGI, Matlab, Formal Logic
Significant experience: Java/Scala, C/C++, Javascript, TCL, PHP
Some experience: Lisp/Scheme, ActionScript, Erlang/Elixir, Ruby

Professional Societies and Volunteering

- Amateur Radio Technician Licence, call sign KK6RWQ
- Member: U.S. Coast Guard Auxiliary, Marina Del Rey Flotilla (District 11SR, Flotilla 12-07)
- Member: IEEE, ACM, and Acoustical Society of America