

# Jonathan Koren

131 Pala Avenue, San Jose, CA 95127  
mobile: +1 408 859 0984

jonathan@jonathankoren.com  
<http://www.jonathankoren.com>

---

## EXPERIENCE

<b>2017 – 2020</b>	<b>Senior Staff Engineer and Manager</b>	<b>Mozilla</b>
<ul style="list-style-type: none"><li>Manager and lead of the Data and Learning team for Pocket. I built my distributed team by recruiting senior machine learning experts and applied machine learning engineers, while also mentoring junior engineers. I report to the CEO of Pocket and am responsible for search, recommendations, advertising relevance, and content understanding.</li><li>Changed the culture from heuristic and one-off approaches to repeatable data-driven decisions. Replaced ad hoc systems with modern stable and repeatable infrastructure.</li><li>Deployed machine learning models to greatly improved recommendation relevance on Firefox new tab resulting in +40% lift in CTR. Architected approach that resulted in +20% lift in revenue on syndicated articles. Oversaw development of a modern document embeddings approach to drive increased syndicated article views by +20%. These improvements are directly linked to significant positive revenue growth.</li><li>Developed Pocket's first machine learning pipeline for deploying trained models to production.</li><li>Improved advertising relevance using a novel decentralized and privacy preserving personalization system.</li><li>Championed and led the creation of more efficient editorial and curation tools to increase the efficiency of the editorial team.</li></ul>		
<b>2015 – 2017</b>	<b>Senior Software Engineer</b>	<b>Ozlo (Acquired By Facebook)</b>
<ul style="list-style-type: none"><li>Principal architect for information extraction and unstructured data.</li><li>Increased the number of supported verticals from one to six, by leveraging data from structured, semistructured, and unstructured data sources, along with actual query logs.</li><li>Greatly expanded Ozlo's search and question answer capabilities, by developing core knowledge base of facts. This was a core technology for natural language processing at Ozlo.</li><li>Improved natural language understanding, natural language synthesis, and support for multilingual retrieval, through the creation of the Ozlo lexicon.</li></ul>		
<b>2014 – 2015</b>	<b>Staff Software Engineer</b>	<b>Facebook</b>
<ul style="list-style-type: none"><li>Technical lead for trending news relevance.</li><li>Improved relevance of trending news result pages, by identifying key individuals and organizations in news articles, and then surfacing their topical posts.</li><li>Increase relevance of the trending news module by improving machine learning relevance models and implementing an explore-exploit framework.</li></ul>		
<b>2010 – 2014</b>	<b>Staff Applied Research Engineer</b>	<b>LinkedIn</b>



- Developed and maintained real-time (RTOS) software for the Man-Machine Interface and the Configuration Management processes for the GSM Base Station Subsystem using C and C++.

---

## EDUCATION

**PhD 2006 – 2010 ON LEAVE**      **Computer Science**      **University of California, Santa Cruz**

Advisor: Dr. Yi Zhang

Research Concentration: Faceted Search, Personalization/Recommendation, Adaptive Interfaces, Machine Learning

**MS 2005**      **Computer Science**      **Southern Illinois University**

Advisor: Dr. Norman F. Carver III

Thesis: Minimizing Communication Cost in an N-Agent Distributed Bayesian Network by Using a Decentralized MDP

**BS 1998**      **Computer Science**      **Southern Illinois University**

---

## PUBLICATIONS

### Blog posts

**J. Koren.** “Ozlo’s Knowledge Base” <https://medium.com/teamozlo/ozlos-knowledge-base-eb74204d7e6c>

### Open Source Projects

GOWN. A Golang implementation of WordNet <https://github.com/ozlo/gown>

### Conference Proceedings

D. Tunkelang, **J. Koren**, P. Ogilvie, J. Wang. Social Navigation: A Position Paper. Proceedings of the 5<sup>th</sup> Workshop on Human-Computer Interaction and Information Retrieval (HCIR '11). Poster Session. Mountain View, CA, USA.

**J. Koren**, Y. Zhang, and X. Liu. Personalized Faceted Search. Proceedings of the 17<sup>th</sup> International Conference on the World Wide Web (WWW '08). Beijing, China.

**J. Koren**, Y. Zhang, S. Ames, A. Leung, C. Maltzahn, and E. Miller. Searching and Navigating Petabyte Scale File Systems Based on Facets. Proceedings of the 2<sup>nd</sup> ACM Petascale Data Storage Workshop (PDSW '07). International Conference for High Performance Computing, Networking, Storage, and Analysis (SC '07). Reno, NV, USA.

Y. Zhang and **J. Koren**. Efficient Bayesian Hierarchical User Modeling for Recommendation Systems. Proceedings of the 30<sup>th</sup> Annual International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR '07). Amsterdam, The Netherlands.

### Book Chapters

M. Stefaner, S. Ferré, S Perugini, **J. Koren**, Y. Zhang "User Interface Design," in Dynamic Taxonomies and Faceted Search G. Maria and Y. Tzitzikas (Eds.). Springer 2009.

---

## TECHNICAL SKILLS

**Programming languages:** Go, Python, Java, Perl, Lisp, C/C++

**Data Technologies:** Hadoop / MapReduce, Pig, Kafka, SQL / Hive, Lucene

**Web Technologies:** HTML, PHP, CSS, Javascript, D3

**Experience** data analytics and modeling, distributed systems, machine learning (ML / AI), personalization and recommendation systems, search, natural language processing and understanding (NLP / NLU), data visualization, mentoring, recruiting / hiring, strategic planning