

Jonathan Koren

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EXPERIENCE

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| 2017 – 2020 | Senior Staff Engineer and Manager | Mozilla |
| <ul style="list-style-type: none">• 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.• Changed the culture from heuristic and one-off approaches to repeatable data-driven decisions. Replaced ad hoc systems with modern stable and repeatable infrastructure.• 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.• Developed Pocket's first machine learning pipeline for deploying trained models to production.• Improved advertising relevance using a novel decentralized and privacy preserving personalization system.• Championed and led the creation of more efficient editorial and curation tools to increase the efficiency the editorial team. | | |
| 2015 – 2017 | Senior Software Engineer | Ozlo (Acquired By Facebook) |
| <ul style="list-style-type: none">• Principal architect for information extraction and unstructured data.• 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.• 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.• Improved natural language understanding, natural language synthesis, and support for multilingual retrieval, through the creation of the Ozlo lexicon. | | |
| 2014 – 2015 | Staff Software Engineer | Facebook |
| <ul style="list-style-type: none">• Technical lead for trending news relevance.• Improved relevance of trending news result pages, by identifying key individuals and organizations in news articles, and then surfacing their topical posts.• Increase relevance of the trending news module by improving machine learning relevance models and implementing an explore-exploit framework. | | |
| 2010 – 2014 | Staff Applied Research Engineer | LinkedIn |

- 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 5th 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 17th 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 2nd 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 30th 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