Carl Livadas

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Objective

Lead the design and development of novel algorithms, systems, and products that leverage data mining/machine learning to offer a compelling user experience and achieve a tremendous business impact. Technologies of interest include Hadoop/Hive/Mahout/Spark MLlib/Weka/Vowpal Wabbit, NLP, Lucene, Solr, and AWS.

Education

Massachusetts Institute of Technology — Cambridge, MA
Doctor of Philosophy in Electrical Engineering and Computer Science, July 2003
Master of Engineering in Electrical Engineering and Computer Science, Sept. 1997
Master of Science in Aeronautics and Astronautics, February 1996
Bachelor of Science in Computer Science, September 1993
Bachelor of Science in Aeronautics and Astronautics, June 1993
Phillips Academy Graduated with Honors, June 1989 — Andover, MA

Honors

Barger Fellow, BBN Technologies, 2003; HKN, MIT, 1992; TBΠ, MIT, 1991

Experience

Nanigans — San Francisco, CA
VP of Optimization (West) — Aug 2014–Present
Senior Director of Optimization (Desktop/Mobile RTB) — Jan 2014–Aug 2014
Leading the engineering and data science efforts of Nanigans' foray into real-time bidding (RTB) exchanges/channels; in particular, the design and implementation of Nanigans' model building and deployment pipeline for machine learning models used to bid for ad impressions on existing and future Open RTB exchange partners. Pipeline includes: data extraction (ETLs), model training, model deployment, reporting, and A/B testing infrastructure.

inPowered (formerly NetShelter Technology Media) — San Francisco, CA
Chief Scientist and Data Platform Lead/Manager — Apr 2011–Dec 2013
Lead inPowered's data platform engineering team from a management and algorithm design perspective. Lead the design and managed the implementation of inPowered's 2nd generation data platform infrastructure to handle 100x+ the data volumes and afford near real-time data updates. Spearheaded the transition to a Java-based stack to ensure performance, maintainability, and extensibility. Championed the adoption of new technologies/practices as appropriate, leveraging the learnings of the broader engineering community to keep inPowered at the technology forefront, to ensure scalability and performance, and to afford sharing of engineering resources. Moderated the adoption of novel services/technologies (AWS and 3rd party service providers) to ensure the right cost/benefit trade-offs for inPowered. Instigated the use of a Hadoop/Hive based infrastructure to mine audit logs for infrastructure and data KPI reporting. Lead the algorithm design of: 1) article classification, 2) article sentiment analysis, 3) article ranking, 4) estimation of article readership based on the article's social media engagement footprint, and 5) ranking of authors within topics of interest.

KAYAK — Sunnyvale, CA
Director of Engineering — Apr 2010–Mar 2011
Principal Scientist — Apr 2009–Apr 2010
Lead the engineering efforts of KAYAK's Sunnyvale office focusing on KAYAK's email, deals, online advertising, and parts of KAYAK's mobile apps. Delivered a number of context-aware ad products leveraging context locality, contextual targeting/optimization, and air and hotel search results. Delivered the initial functionality and infrastructure needed to place air/hotel bookings on KAYAK's products through 3rd parties; a top company priority at the time which has since been fully built out. Put together a proposal for KAYAK's 2nd generation infrastructure for email production and distribution; this proposal has since been adopted and built out. As a principal scientist, focused on efforts to regionalize/personalize KAYAK's products and optimize performance.

Intel Corporation — Santa Clara, CA
Research Scientist, Communication Technology Lab, Corporate Technology Group — Jan 2008–Apr 2009
Research Scientist (Consulting), Intel Research Santa Clara (IRSC) — Oct 2006–Jan 2008
Worked on the ***Distributed Detection and Inference*** (DDI) project; a collaborative worm detection system. Designed and implemented: 1) an adaptive local detector that adjusts the threshold of issuing

alarms based on learned behavior, 2) a faithful analytic model of DDI's behavior, critical for understanding DDI's behavior, evaluating its performance and scalability properties, and exploring its parameter space, and 3) efficient and scalable gossip-based messaging and membership services for DDI.

BBN Technologies   Cambridge, MA
Network Scientist, Internetwork Research Department   September 2003–October 2006
Conducted cutting edge research in computer networks. Projects included: ***ZombieStones*** — A machine learning-based system that identifies network connections that are part of suspicious botnets; ***IP-SPOOR*** — An entropy-based study of how to best place network traffic monitors for effective IP packet traceback; ***Stepping Stones*** — A system that identifies interactive connections used to obfuscate the origin of cyber-attacks; ***Stingray*** — An insider threat detection system that uses Bloom filters to efficiently log large amounts of network traffic and principal components analysis and machine learning techniques to detect network traffic anomalies.

MIT, \$50K Entrepreneurship Competition   Cambridge, MA
Semi-finalist, Prosopa.com   January 2000–May 2000
Prosopa.com delivered personalized video ads through photo-realistic talking faces driven by text or audio.
Semi-finalist, FairTrust, Inc. (launched as OpenRatings, Inc.)   January 1999–May 1999
FairTrust, Inc. delivered C2C trustworthiness ratings services to online communities.

Proficiencies **Hands-on Knowledge:** C/C++, Bash/Perl, Hadoop/Hive, Python/Pandas, Vowpal Wabbit, Weka, MySQL, MATLAB/Octave, *ns*, LATEX

Management Knowledge: Java, Spring, Apache Camel, AWS (S3, SQS, RDS, *etc*), SOLR/Lucene

Languages: English, French, and Greek