

Peter B. Lubell-Doughtie

CONTACT INFORMATION

SRC: github.com/pld

EDUCATION

University of Amsterdam, Amsterdam, Netherlands

MSc, Artificial Intelligence, Cum Laude, 2011

Track: Learning Systems, Thesis: *Learning to Rank from Relevance Feedback*

Stanford University, Stanford, California USA

BS, Symbolic Systems, 2006

Concentration: Decision Making and Rationality

PROFESSIONAL EXPERIENCE

Ona, New York, New York USA

Co-Founder and CTO

November 2013 - Present

Led strategy and grew the technology team as we built a SaaS and other products that doubled total and recurring company revenue year-over-year. Lead architect on voting software for the Libyan national election, globally used health and data collection products and deployments. Managed general operations, team resourcing, recruiting, contract negotiations, fundraising, finances as we grew to an 80 person team and 40 person engineering team. Programmed in Clojure, ClojureScript, Java, Kotlin, Python.

Mira Financial, New York, New York USA

Advisor

January 2018 - April 2019

Served as an advisor contributing to data engineering, artificial intelligence, and health systems needs.

Intent Media, New York, New York USA

Lead Data Engineer

November, 2012 - November 2013

Led the data engineering team in building a data platform for Extract Transform Load, analysis, and modeling at scale. Communicated the data team's roles, needs, and accomplishments to the executive team and the company. Researched and published a novel distributed logistic regression implementation based on BFGS. Programmed in Clojure, Cascalog, Java, Pig, and Ruby.

Columbia University, Modi Research Group, New York, New York USA

Senior Software Engineer

December, 2011 - October 2013

Built semi-automated data analysis and management tools for energy infrastructure and development planning in Python and R. Developed web applications and web services in Python using Django for mobile data collection and management. Project managed remote teams and coordinated with corporate, non-profit, and government project partners.

Helioid, New York, New York USA

Founder

April, 2008 - December 2011

Developed and integrated internet facing learning algorithms in Ruby. Responsible for business development and administration, spoke at conferences and published papers to promote the company and its research. Researched and implemented technologies in information retrieval, text analysis, statistics, and machine learning. Developed web applications, including REST-based APIs, in Ruby on Rails.

Princeton University, Princeton, New Jersey USA

Machine Learning Researcher

October, 2008 - July 2009; October, 2011 - April, 2012

Member of the CITP, reported to Edward Felton and Matthew Salganik. Collaborated with Nadia Heninger and other computer science graduate students to create an online sociology laboratory. Developed a REST and XML based web service, as well as Ruby on Rails and JavaScript web applications and plugins. Analyzed data using Ruby, Python, and R. Wrote algorithms for data processing in Ruby and C. Researched and implemented pair-wise algorithms for processing large amounts of vote data to determine user preferences.

Mobile Input Devices and Systems, Alameda, California USA

Managing Engineer

April, 2008 - June, 2009

Participated in strategic planning and business development. Managed software development of chorded typing glove and typing pad, written in C and Assembly. Implemented and maintained website in Ruby on Rails.

Self Employed, New York, New York USA

Consultant

December, 2007 - March, 2008

Advised on requirements for secure web applications. Maintained web applications in Ruby on Rails. Wrote programmer evaluation tests for Ruby, Ruby on Rails, and JavaScript. Recommended additions and modifications to existing internet products and services. Developed and implemented websites and content management systems in PHP, Ruby, and SQL. Edited graphics and layouts using Adobe Photoshop and Adobe Illustrator.

Netsprout, San Francisco, California USA

Lead Developer

June, 2006 - November, 2007

Responsibilities included team management, client interaction, individual and collaborative development. Developed high availability internet applications in Ruby on Rails, AJAX, Actionscript, PHP, and JSP. Developed client side applications in Java. Designed, tested, and implemented databases. Administered redundant Linux servers. Developed transcoding systems using FFmpeg. Developed Ruby on Rails plug-ins. Performed code and performance testing. Developed XML API and RSS feeds.

Stanford University, Stanford, California USA

Research Assistant

June, 2006 - December, 2006

Compiled summaries and distilled relevant information from academic papers and relevant books. Organized this information in databases, flow charts, and text summaries. Presented and reported the information.

ACADEMIC
EXPERIENCE

IEEE Transactions on Neural Networks and Learning Systems

Reviewer

March, 2014 - December, 2015

Reviewed manuscripts for publication.

Stanford University, Stanford, California USA

Undergraduate Research Grant Recipient

June, 2004 - September, 2004

Developed a genetic programming based algorithm that evolved agent communication systems. Reviewed literature on multi-agent communication and evolutionary computation. Wrote paper detailing results. Primary advisor Nils Nilsson. Secondary advisor John Koza.

PUBLICATIONS

Mehl, G. et al. A full-STAC remedy for global digital health transformation: open standards, technologies, architectures, and content, *Oxford Open Digital Health*, 2023

Okanda, D. et al. Low frequency of Plasmodium falciparum hrp2/3 deletions from symptomatic infections at a primary healthcare facility in Kilifi, Kenya. *Frontiers in Epidemiology*, 2023

Tamrat, T. et al. Digitalization of routine health information systems: Bangladesh, Indonesia, Pakistan. *Bulletin of the World Health Organisation*, 2022

Lubell-Doughtie P, Bhatt S, Wong R, Shankar A. Transforming Rapid Diagnostic Tests for Precision Public Health: Open Guidelines for Manufacturers and Users. *JMIR Biomed Eng*, 2022

Chunjong Park et al. The Design and Evaluation of a Mobile System for Rapid Diagnostic Test Interpretation. *Proceedings of the ACM on Interactive Mobile Wearable and Ubiquitous Technologies*, 2021.

Lubell-Doughtie, P. and Sondag, J. Practical Distributed Classification using the Alternating Direction Method of Multipliers Algorithm. *IEEE BigData*, 2013.

Lubell-Doughtie, P. et al. Improving Data Collection and Monitoring through Real-time Data Analysis. *ACM DEV*, 2013.

Lubell-Doughtie, P. and Hamilton, K. Helioid at TREC-Legal 2011: Learning to Rank from Relevance Feedback for e-Discovery. *Proceedings of the 2011 Text REtrieval Conference*, 2012.

Lubell-Doughtie, P. and Hofmann, K. Learning to Rank from Relevance Feedback for e-Discovery. *ECIR 2012 - 34th European Conference on Information Retrieval*, 2012.

Lubell-Doughtie, P. and Hofmann, K. Improving Result Diversity using Probabilistic Latent Semantic Analysis. *DIR 2011 - Dutch-Belgian Information Retrieval Workshop*, 2011.

Lubell-Doughtie, P. Using Genetic Programming to Evolve a General Purpose Sorting Network for Comparable Data Sets. *Genetic Algorithms and Genetic Programming at Stanford 2003*, 2003.

RECENT TALKS

FHIR DevDays, 2023, Amsterdam, Netherlands.

WHO Smart Guidelines Symposium, 2023, Geneva, Switzerland.

Symposium on Open Guidelines for Rapid Diagnostic Tests, Organizer and Keynote, 2022, Virtual.

Global Development Health Forum 2019, Bethesda, Maryland, USA.

Saving Brains Data For Action Workshop 2019, Dubai, United Arab Emirates.

Saving Brains Data Preparation, Analysis, and Writing Workshop 2019, Sao Paulo, Brazil.

Royal Academy of Engineers, Frontiers on Engineering for Development 2018, Ho Chi Minh City, Vietnam.

Columbia Global Mental Health Seminar 2018, Columbia University Medical Center, New York, New York, USA.

Geo for Good User Summit 2015, Google Headquarters, Mountain View, California, USA.

PyConZA 2014, Keynote, Writing Python Code to Decide an Election, Johannesburg, South Africa.

Mobile Technologies and their Intersection with Global Health, Mount Sinai Global Health Program 2014, New York, USA.

IEEE Big Data 2013, Industry Track, Santa Clara, USA.

Startup Track, Society of Scholarly Publishers (SSP) 2012, Washington D.C., USA.

DataDev Workshop, Mobila Data Management 2012, Bangalore, India.

SPOKEN LANGUAGES

- *English*: 5/5 Native proficiency
- *Spanish*: 2 Limited working proficiency
- *French*: 2 Limited working proficiency
- *Chinese (Mandarin)*: 1 Elementary proficiency
- *Arabic (MSA)*: 1 Elementary proficiency