Rob Shearer

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OVERVIEW

Experienced engineering manager, architect, and technologist with a background in developer tooling, data distribution middleware, structured data representation, API design, and advanced algorithm development.

EDUCATION

University of Oxford, Oxford, England 2007–2011
D.Phil. Knowledge Representation and Automated Reasoning

University of Manchester, Manchester, England 2005–2006
M.Sc. Advanced Computer Science

Brown University, Providence, RI 1994-1996
Harvard University, Cambridge, MA 1993

INDUSTRY
EXPERIENCE

Engineering Manager, Google Cloud SDK   **Google LLC**
New York, New York   **July 2016–January 2019**

Cloud SDK included all client-side tools for working with the Google Cloud Platform (GCP), supporting interactive and scripted developer and devops workflows. Chief among those tools was **gcloud**: a command-line interface for scores of GCP APIs, exposing more than 3,000 commands and over 14,000 user-visible features (80% added under my leadership).

I led a team of a dozen direct engineering reports, managed contributions from more than 300 engineers across 80 teams throughout the company, owned Cloud SDK's product strategy, and ran the group's user experience, documentation, and data science initiatives.

I conducted the group's first competitive analysis and customer satisfaction studies, established consistent design standards, and built cross-cutting features into the platform's foundation. Cloud SDK established itself as the best-in-class cloud platform shell toolchain, and a proven competitive advantage for GCP.

In order to maintain this best-in-class interaction quality at the scale of tens of thousands of features, I initiated and led the creation of novel internal tooling to allow extremely rapid design and implementation of handcrafted interfaces, as well as a robust collaboration and review process that scaled to hundreds of active development engagements with other teams.

Technical Architect; Team Lead; Senior   **Bloomberg LP**
Engineer
New York, New York   **November 2011–July 2016**

Technical owner of BLPAPI and related products, a global data routing infrastructure with SDK libraries for C, C++, Java, .NET, Python, and Perl. Extended desktop-focused product to build Bloomberg's real-time enterprise data offering, and also displaced other internal technologies to become Bloomberg's primary internal real-time data distribution platform across all products, including the Bloomberg Profesional Service (aka The Terminal).

Designed all major features, including new wire protocols, distributed connection management and routing algorithms, and optimized internal data structures, and personally implemented key aspects of most of them (supervising and reviewing the remainder).

Managed parallel independent development efforts across three major languages (and dependent wrapper implementations across several more languages) and support for a half dozen platforms, with responsibility for teams in New York, London, and St. Petersburg.

Major contributor to Bloomberg C++ engineering standards and best practices; developed component-based thread safety methodology and associated training; regular consultant for Bloomberg Development Environment (BDE) design.

VP Engineering
New York, New York

Broad Street Analytics
May 2011–October 2011

Broad Street Analytics, now called Ufora, is an angel-backed startup providing a platform for development of high-performance distributed applications to the finance industry.

Lead Architect
Carlsbad, CA

Cerebra, Inc.
March 2004–April 2005

Responsible for all core technology aspects of venture-capital-backed startup applying advanced semantic web technologies to commercial solutions, including military, medical, and financial applications. Led company research group; designed patentable new technologies; developed technology roadmap; participated in W3C standardization efforts; managed training, product documentation, and core technology marketing materials; worked with clients and strategic partners to design custom technology applications.

Senior Engineer
London, England

Network Inference, Ltd.
July 2002–March 2004

Created the industry's first enterprise-grade reasoner for description logics; developed XQuery-based language for interrogation of both RDF and OWL knowledge bases; designed technical approaches and data modeling patterns for all major client and internal projects. Network Inference achieved additional funding, moved to California, and was renamed Cerebra, Inc.

Senior Engineer
Cambridge, England

Transversal, Ltd.
February 2001–July 2002

Molded a large (300,000+)-line academic code base into a successful commercial product applying bleeding-edge natural-language processing technologies to the problems of content management and retrieval.

RESEARCH
APPOINTMENTS

Reasoning Infrastructure for Ontologies and Instances
Oxford, England

Oxford University Computing Laboratory
August 2007–October 2010

Developed HermiT, a groundbreaking new reasoner for the W3C Web Ontology Language (and more expressive variants), which became both the fastest available reasoner (in many cases asymptotically faster, capable of handling in seconds what other reasoners could not complete in years), and the most widely-used such reasoner.

KnowledgeWeb
Manchester, England

University of Manchester
September 2005–July 2007

KnowledgeWeb was an EU "Network of Excellence" bringing together 19 academic and industry partners to advance research in Semantic Web technologies. I managed the "Semantic Web Language Extensions" work package, coordinating work across all institutions on knowlege representation languages, serialization formats, expressivity extensions, query languages, and reasoning services. Results from this work package led directly to OWL 2, now a W3C recommendation, as well as to major technical advances in reasoning algorithms, architectures, and querying techniques.

ADDITIONAL
INFORMATION

Common Room President of Linacre College, University of Oxford, 2009–2010.

Founder and former president (1996) of Technology House, Brown University's first and only technology-focused residential society.
http://www.techhouse.org