

# Sentient Technologies Media Kit

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## **ABOUT SENTIENT**

Sentient has created the largest and most powerful intelligent system in the world. We harness the potential of massive data to solve highly complex problems. Our artificial intelligence (AI) can identify and answer critical questions in new and groundbreaking ways, while empowering people and businesses to make smarter decisions. Learn more at: [sentient.ai](https://www.sentient.ai)

## OVERVIEW

**Funding to date:** \$174 million

**Founded as Genetic Finance:** 2007

**Launched as Sentient Technologies (out of stealth):** 2014

**Headquartered:** San Francisco, Calif.

**Offices in:** San Jose, Calif., Amsterdam and Hong Kong

**Employees:** 100+

## STRATEGIC INVESTORS:

- Access Industries
- Horizon Ventures
- Tata Communications

## SENTIENT TECHNOLOGIES

### Evolutionary Computation

Our evolutionary intelligence technology is breaking new ground in the modern artificial intelligence era where we are applying established academic work to create breakthroughs in the fields of investment and medical research. Inspired by biological evolution, evolutionary intelligence generates specialized programs known as agents that affect solutions to proposed problems. Because EC is “embarrassingly parallelizable,” it can work semi independently on individual CPU cores, loosely coordinated through asynchronous communications between many nodes. In the past, EC typically converged rapidly, within a few hours on a few CPUs. Using our patented technology, we have managed to scale EC to run through trillions of generations across millions of CPUs to create a system powerful enough to solve some of the world’s most complex problems.

### Deep Learning

Inspired by the way the brain works, Sentient’s intent-powered intelligence technology analyzes image-based interactions in order to deeply understand a user’s intent and preferences. It then curates content and recommends actions based on that understanding. By combining deep learning and proprietary technologies, Sentient is transforming the user experience in ecommerce, marketing and other areas. At the core of this experience is an intent-detection and content curation engine unlike any other AI system available today. Why? Because it continuously refines, organizes and delivers experiences tailored to a user’s specific needs in that moment. It is based on detection of the user’s immediate intent, rather than

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relying on text search, metadata, historical data derived from previous sessions or marketing cohorts. The result of this technology is a better customer experience with more relevant content.

Backed by the use of idle or dark CPU cycles that make up our proprietary and massively distributed compute resource, Sentient Aware uses visual perception to consume any amount of images and easily integrates into existing workflows, making it ideal for a broad range of markets beyond e-commerce. As we add more sensory receptors to our Sentient Aware platform, it will understand many different content types including extended visual media (images and video), sound (voice, music) and text. Imagine applying Intent-based Intelligence technology to movies, where our system can intuit what a person wants to watch. Or in travel, where our system can accurately identify the vacation package a person is most likely to choose. The possibilities of such as system are limitless and we are excited to see the innovations and results it creates for our customers and their consumers.

## Scale

As a new era of AI captures the attention of business leaders in every industry, Sentient is aligning its breakthrough technologies to solve core business problems that have endured for decades, despite detailed data keeping. Our expertise and unique advantage lies in applying AI to massive, dedicated compute and large amounts of high dimensional data. To do this, we link together two million CPU cores and 5,000 GPU cards dispersed around 4,000 sites worldwide to create one massive distributed compute resource. This creates what we call distributed artificial intelligence (DAI), AI that runs on a scale that is simply not available from the leading cloud providers.

We have solved complex security and privacy challenges to achieve this scale, allowing us to discover data insights that create a global impact. Discover how we apply this compute capacity to address everything from virtual stock traders to saving lives in the ER to autonomously optimizing websites or even helping you discover your new wardrobe.

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## PRODUCTS, SERVICES AND RESEARCH

### **Sentient Aware**

Sentient Aware is a visual search and product discovery engine that provides e-commerce retailers with an entirely new interface. Just like a store associate, Sentient Aware knows a retailer's merchandise and understands what each shopper is looking for in real-time, connecting the right products to individual customers. To learn more, visit [sentient.ai/aware](https://sentient.ai/aware)

### **Sentient Ascend**

Sentient Ascend is the first conversion rate optimization solution that leverages the power of evolutionary algorithms to find winning website designs. Ascend learns, adapts, and reacts to user interaction to find the best performing combination of designs in less time and with less traffic than required by traditional testing methods. And it automates the testing process from end-to-end, saving countless hours of time for marketing teams. To learn more, visit [sentient.ai/ascend](https://sentient.ai/ascend)

### **Sentient Investment Management**

Sentient Investment Management runs a fully automated machine-traded fund. Its proprietary quantitative trading and investment strategies are continuously evolved and optimized using Sentient's distributed artificial intelligence platform. To learn more, visit [sentientim.com](https://sentientim.com)

### **Sentient Labs**

Sentient Labs, our research initiative, works both internally and with outside research, educational and commercial partners from all over the world to advance both the state of the art in AI and to apply it to difficult scientific problems. To learn more, visit [sentient.ai/sentient-labs](https://sentient.ai/sentient-labs)

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## SOLUTIONS GROUP

The Solutions Group works with businesses across a wide range of industries to develop new products that can help solve their largest problems using Sentient's Distributed Artificial Intelligence.

Over the past year we've engaged with leading Fortune 100 companies, governmental and political agencies, top technology startups, NPOs, the world's largest health organizations, and more. Some of the specific areas of possible focus for our technology and techniques, include:

Industry	Product/Solution
<b>INSURANCE</b>	<ul style="list-style-type: none"><li>• Actuarial assessment and modeling</li><li>• Compliance &amp; fraud detection</li><li>• Product optimisation</li><li>• Customer acquisition</li><li>• Robo advising</li></ul>
<b>LENDING</b>	<ul style="list-style-type: none"><li>• Credit-worthiness modeling</li><li>• Risk assessment</li><li>• Fraud detection</li></ul>
<b>TELECOM</b>	<ul style="list-style-type: none"><li>• Network information &amp; security</li><li>• Traffic optimisation</li></ul>
<b>HEALTHCARE</b>	<ul style="list-style-type: none"><li>• Predictive/diagnostic analytics</li><li>• Medical adherence</li><li>• Care support</li><li>• Healthy behavior</li></ul>
<b>MANUFACTURING</b>	<ul style="list-style-type: none"><li>• Predictive maintenance</li><li>• Quality control</li><li>• Risk management</li><li>• Logistics</li></ul>

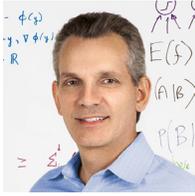
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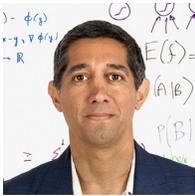


## SENTIENT TECHNOLOGIES EXECUTIVE TEAM & BIOGRAPHIES



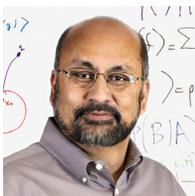
### Antoine Blondeau – CO-FOUNDER AND CHAIRMAN

A seasoned entrepreneur and investor, Antoine has 25 years of experience in the technology industry, having held senior leadership positions at Good Technology, Salesforce.com and Sybase. Antoine's career highlights include leading Dejima as CEO, the company that powered DARPA's foundational CALO project that later evolved into Apple's Siri. Antoine was also COO of Zi Corporation, whose smart text input software was embedded in hundreds of millions of devices. Antoine is an investor, board member and advisor in a number of companies in California, Greater China and Japan, and is the author or co-author of 5 patents. Antoine holds a MBA from the Paris Graduate School of Management (ESCP) and has studied at the faculties of Economics and Commerce of Chuo University in Tokyo.



### Babak Hodjat - CO-FOUNDER AND CHIEF EXECUTIVE OFFICER

Babak Hodjat is responsible for the core technology behind the world's largest distributed artificial intelligence system. Babak is a serial entrepreneur, having started a number of Silicon Valley companies as main inventor and technologist. Prior to co-founding Sentient, Babak was senior director of engineering at Sybase iAnywhere, where he led mobile solutions engineering. Prior to Sybase, Babak was co-founder, CTO and board member of Dejima Inc., acquired by Sybase in April 2004. Babak is the primary inventor of Dejima's patented, agent-oriented technology applied to intelligent interfaces for mobile and enterprise computing – the technology behind Apple's Siri. Babak is a published scholar in the fields of Artificial Life, Agent-Oriented Software Engineering, and Distributed Artificial Intelligence, and has 25 granted or pending patents to his name. Babak holds a PhD in Machine Intelligence from Kyushu University, in Fukuoka, Japan.



### Gurmeet Lamba - CHIEF OPERATING OFFICER AND GENERAL MANAGER, SENTIENT ASCEND

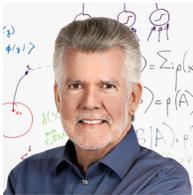
Gurmeet is Chief Operating Officer and General Manager of Ascend at Sentient, responsible for the productization of Sentient's core AI technologies, which encompasses engineering and engineering services. He is also responsible for operations and human resources. Prior to joining Sentient, Gurmeet led the Riverbed product team for UCExpert – a monitoring solution for enterprise Unified Communications. He came to Riverbed with the acquisition of OPNET, which had previously acquired his company Clarus Systems, a firm specializing in VoIP/video management software. As SVP of Product at Clarus Systems, Gurmeet was responsible for driving R&D, product management, technology innovation and services. Before joining Clarus, Gurmeet was Director of Engineering for Avaya's Unified Communications business unit. Here he led the transition to next generation Unified Messaging, speech recognition & mobility applications. Gurmeet also held engineering leadership positions at Bell Labs, and is a recipient of the Bell Labs Presidents Award. Gurmeet has a B.Tech in Electrical Engineering from the Indian Institute of Technology, Delhi and an MS in Electrical Engineering (Robotics) from the University of Florida. He also completed the Executive Management Program at Stanford University's Graduate School of Business.

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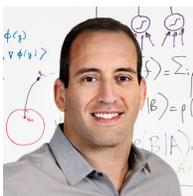
#### **Anne Brennan – CHIEF FINANCIAL OFFICER**

Anne Brennan is the Chief Financial Officer at Sentient. An established senior finance leader, Anne is skilled at partnering with executive suites in global organizations to influence strategy, win business, arrange financing, and control the operations of public and VC-backed start-ups within fast growth environments. She brings considerable expertise in fundraising and mergers and acquisitions to the company. Most recently, Ms. Brennan acted as CFO of Emotient, a leading cloud-based artificial intelligence start-up. There, she led the financial aspects of their fundraising process, which then converted into a successful M&A process and acquisition by Apple. Anne's prior career highlights include serving as Chief Financial Officer of Sunrun (NASDAQ:RUN), where she was responsible for all aspects of finance and accounting helping to transform the company into an IPO-ready organization. Additionally, Anne served as CFO at Openwave Systems/Unwired Planet (NASDAQ:UPIP), a \$250M global SaaS/software services innovator delivering context-aware mobile solutions. Ms. Brennan began her career at Racal Electronics, a global professional electronics company with operations in telecommunications (Vodafone), security and defense, where she served in a number of financial roles. Ms. Brennan is a Chartered Certified Accountant and holds a degree in Accountancy from Glasgow Caledonian University.



#### **John Owens - CHIEF PEOPLE OFFICER**

John Owens is Chief People Officer at Sentient Technologies. A recognized leader in building high performance teams, John heralds a rich experience in human resources for teams that thrive on innovation in a fast-paced, complex environment. John's career includes consulting experience at EastWest Consulting and Essex Property Trust where he advised in recruiting, leading, developing and coaching teams in startup, rapid growth or transitional phases. John's most recent position outside of consulting has been as a Senior Vice President of Human Resources for Epocrates where he grew the company from a handful of employees in one office to a team of almost 400 employees now in three locations. John holds a B.S. in Occupational Health and a B.S. in Business from San Jose State University.



#### **Jeff Holman – CHIEF INVESTMENT OFFICER, SENTIENT INVESTMENT MANAGEMENT**

Jeff Holman is Chief Investment Officer at Sentient Investment Management. Prior to joining the company, he worked at Highbridge Capital Management, one of the world's largest hedge fund firms, where he was a Managing Director and Chief Risk Officer. He began his career at Citadel Investment Group where he led portfolio construction efforts as a member of the Global Equities team. Following Citadel, he was a Portfolio Manager for International Equity strategies at Fuller & Thaler Asset Management. Mr. Holman earned a B.A. in Applied Mathematics, an M.A. in Statistics, and a Ph.D. in Economics from the University of California, Berkeley where his research involved modeling left tail correlation between investment strategies, and the behavioral economic implications of fallible memory.

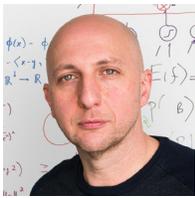
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**Robert Munro – CHIEF OPERATING OFFICER AND CHIEF FINANCIAL OFFICER,  
SENTIENT INVESTMENT MANAGEMENT**

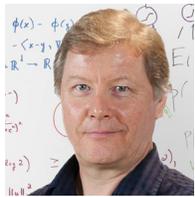
Robert Munro is Chief Operating Officer, Chief Financial Officer and Chief Compliance Officer of Sentient Investment Management. Mr. Munro was previously a founding partner and COO/CFO/CCO at Tree Capital, an emerging markets hedge fund, responsible for all operations, accounting, legal & compliance. Prior to co-founding Tree Capital, he was employed at Artha Capital as COO/CFO/CCO from 2004-2007, where he played an integral role in the firm's growth from less than \$100 million to over \$1.5 billion. Before that, Mr. Munro was a convertible bond trader and analyst at Gabelli Asset Management, responsible for trading the firm's portfolio of convertible bonds on an outright and hedged basis; VP of finance at ProcureNet, a venture capital-backed electronic procurement software provider where he was hired to take the company public and assume the CFO role; and VP of international equities at Bear Stearns, responsible for all accounting, finance, operations, and risk management for the group covering Asia, Europe, and Latin America. He graduated with a BA with distinction in economics and finance from Binghamton University and an MBA in finance from Columbia University.

**Arshak Navruzyan – CHIEF TECHNOLOGY OFFICER**



Arshak Navruzyan is chief technology officer at Sentient responsible for leading the engineering direction and vision for Sentient's core distributed artificial intelligence (DAI) platform. He is in charge of product strategy and research for the DAI platform and also leads the data science team in support of Sentient's Intelligent Commerce offerings and trading for Sentient Investment Management.

He has been in technology leadership roles at Argyle Data, Alpine Data Labs, Endeca/Oracle and is the founder of Fellowship.AI, a machine learning fellowship program. Arshak has delivered AI solutions for multi-billion dollar quantitative hedge funds, venture-funded startups and some of the largest telecoms in the world.



**Risto Miikkulainen – VICE PRESIDENT, RESEARCH**

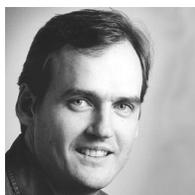
Risto Miikkulainen is vice president of research at Sentient Technologies and a Professor of Computer Science at the University of Texas at Austin. He received an M.S. in Engineering from the Helsinki University of Technology, Finland, in 1986, and a Ph.D. in Computer Science from UCLA in 1990. His recent research focuses on methods and applications of neuroevolution, as well as neural network models of natural language processing and vision; he is an author of over 370 articles in these research areas, and has 16 patents pending. He is an IEEE Fellow and a recipient of the 2017 Gabor Award of the International Neural Network Society.

## ADVISORS



### **Adam Cheyer – CO-FOUNDER AND VP ENGINEERING, VIV LABS**

Adam is co-founder and VP Engineering at Viv Labs, where he is working on simplifying the world by providing an intelligent interface to everything. Previously Adam was co-founder and VP Engineering of Siri Inc., and, after Apple acquired the company, a Director of Engineering in Apple's iOS group. As a startup, Siri won the Innovative Web Technologies award at SXSW, and was chosen a Top Ten Emerging Technology by MIT's Technology Review; Apple's version of Siri was presented "Best Technical Achievement" at the 2011 Crunchies Awards, and is now available on hundreds of millions of devices. Adam was a member of the founding team at Change.org, an international community of 80 million members who fight for what's right locally, nationally, and globally. He was also a co-founder of Genetic Finance. At SRI International, Adam was Chief Architect and led development for the CALO project, the largest machine learning and AI project in U.S. history. He was also VP Engineering at Verticalnet (e-commerce) and at Dejima (mobile). Adam graduated with highest honors from Brandeis and received the Outstanding Master's Student award from UCLA's Engineering School. He is the author of more than 65 publications and 15 patents.



### **Peter Bartlett – PROFESSOR, UNIVERSITY OF CALIFORNIA AT BERKELEY**

Peter Bartlett is a professor in the Computer Science Division and Department of Statistics at the University of California at Berkeley. A distinguished academic and esteemed author of many books and academic papers in the field of machine learning and statistical learning theory, Peter consults and advises on Sentient's current plans and market direction and helps identify key opportunities in the field of machine learning. Professor Bartlett was awarded the Malcolm McIntosh Prize for Physical Scientist of the Year in Australia in 2001, was chosen as an Institute of Mathematical Statistics Medallion Lecturer in 2008, and became an IMS Fellow and Australian Laureate Fellow in 2011. Bartlett was elected to the Australian Academy of Science in 2015.



### **Nello Cristianini – PROFESSOR OF ARTIFICIAL INTELLIGENCE, UNIVERSITY OF BRISTOL**

Nello Cristianini is a Professor of Artificial Intelligence at the University of Bristol, working on machine learning, data science, and the automated analysis of patterns in media content. He is a former recipient of the Royal Society Wolfson Research Merit Award and a current holder of a European Research Council Advanced Grant. In June 2014, Nello Cristianini was included in a list of the "most influential scientists of the decade" compiled by Thomson Reuters (listing the top one per cent of scientists who are "the world's leading scientific minds" and whose publications are among the most influential in their fields). Cristianini is the author of three books on machine learning and bioinformatics, published by Cambridge University Press, and prior to his appointment in Bristol he has been a professor at the University of California, Davis. Recent research in data science focuses on news content analysis, social media analysis, and the ethical implications of the data-driven approaches to science, business and society.

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**Ruth Hartman – ADVISOR**

Ruth Hartman brings tremendous retail experience from her years on the senior leadership teams at both Macy’s and DSW and has a track record of consistently delivering profitable growth at every company she’s helped lead. She is currently the Chief Merchandising Officer at Le Tote, one of the world’s largest rental subscription services for apparel and accessories and joined Sentient’s Advisory Board in 2016. Ruth has over 20 years of practical operating experience in retail, where she’s been responsible for billion dollar businesses. She has a strong reputation as a merchant leader and relationship builder, having worked with myriad best-in-class brands like TAG Heuer, Gucci, Michael Kors, Burberry, and more. She brings invaluable relationships from merchandise areas such as footwear, handbags, jewelry, watches, accessories, and intimate apparel. Ruth holds a bachelor’s degree from Simmons College and currently lives in San Francisco.



**Melissa Taunton – ADVISOR**

Melissa Taunton is Partner at New Enterprise Associates (NEA), one of the world’s largest and most active venture capital firms, where she’s been a partner since 2015. Melissa began her career in technology at Qualcomm, Hewlett Packard and Netopia, leveraging her deep experience in manufacturing and the supply chain. She then transitioned to healthcare, as President of Drip Drop, Inc., which developed and sold a oral rehydration product for hospital and home use. Prior to joining NEA, Melissa was an operating partner at Khosla Ventures. She focuses on executive talent acquisition and investing in founder/CEOs across health tech, enterprise and consumer sectors. In 2014, Fortune named Melissa one of the most powerful women in the next generation of corporate leaders.



**Tom Whittaker – ADVISOR**

Tom Whittaker has over 20 years of experience in software system design, development and engineering management. Previously, Tom led the development and operations of Sentient’s AI powered trading systems. Tom has spent his career as a senior architect and engineering manager, specializing in scalable architectures and mission critical systems. Before joining Sentient, Tom was the Lead Architect at Yahoo in charge of designing and developing its mobile advertising systems. He was also a member of Yahoo’s corporate development team. Prior to Yahoo, Tom was CTO and VP of engineering at NASDAQ-traded AvantGo Inc, preceding its acquisition by Sybase, Inc. in 2004. Prior to joining AvantGo, Tom was a co-founder and architect at Diba, an information appliance software company, which was acquired by Sun Microsystems. Tom has additionally worked at the NASA-Ames Research Center, where he researched computational fluid dynamics visualization and hypersonic aircraft systems for seven years. Tom is the author of eleven patents

Tom holds a B.S. in Physics from George Mason University.