

# Jay LeBoeuf

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348 Church Street, #101, San Francisco, CA 94114 ▪ (415) 596-5392 leboeuf.jay@gmail.com

## Curriculum Vitae

### Summary

Forward-thinking, market-oriented technology entrepreneur with a proven history of driving product innovation through a unique blend of internal applied research, academic/industry collaborations, and corporate strategic partnerships. Founded technology licensing company Imagine Research, Inc with clients including the world's leading media and entertainment technology companies.

### Education

**Stanford University**, Stanford, CA, June 2000

Masters of Arts in Music, Science, and Technology. Center for Computer Research in Music and Acoustics (CCRMA). GPA 4.0.

**Cornell University**, Ithaca, NY, May 1999

Bachelor of Science in Electrical Engineering

### Professional Experience

**Founder/Chief Executive Officer**, Imagine Research, San Francisco, CA January 2008 – present  
Lead an applied research company creating the world's first sound-object recognition platform: MediaMined™. License and develop next-generation audio analysis, intelligent metadata generation, and sound search engine technologies for media technology companies. Leading clients include Skywalker Sound (Lucasfilm), Pandora, Line 6, iZotope, JamLegend, Queen Mary University of London, and more.

- Profiled as a [Businessweek Innovator](#) in Businessweek, SF Chronicle, MSBNC. Interviews on [BBC](#) and [Science 360](#).
- Awarded two U.S. National Science Foundation Small Business Innovation Research (SBIR) Awards (Phase I and Phase II) in recognition of the technical and commercial merit of our innovative sound-object recognition technology.
- Strategic management, including partnerships with content partners companies, new clients, and acquisition of FASTLab, Inc.
- Developers of patent-pending MediaMined™ sound-object recognition software and sound similarity engines.
- Lead team of over a dozen software engineers, researchers, and contractors.

**Research Engineer**, Digidesign, Daly City, CA

November 2005 – January 2008

Directed internal and external research initiatives for world's leading manufacturer of software and hardware systems ("Pro Tools") for audio recording, editing, and production. Managed applied research and software development in music information retrieval, audio signal processing, machine learning, and human-computer interface technologies.

- Established and managed sponsored research agreements and intellectual property agreements with leading US and EU Universities, including a multi-year, €500,000 research grant project.
- Led interdisciplinary research teams of graduate students, professors, and researchers.
- Provided research vision, competitive analysis, technical feasibility evaluation, and prototype design for next-generation technologies targeted towards audio/music production and content-creation markets (three pending patent applications, numerous publications, and innovative product technologies).
- Led software engineering of prototypes and preliminary designs through extensive Matlab-based development and C/C++.
- Presented technical results and guidance to diverse audiences including engineering, product marketing, and executive teams including CTO/CEO.
- Fostered research collaborations between Avid Technologies' audio and video divisions.

**Senior Audio Test Engineer (Lead),** Digidesign, Daly City, CA July 2000 – November 2005

Supervised and led software quality assurance teams of 3 to 15 engineers. Contributed to the feature design and testing of revenue-driving projects such as Pro Tools' transition to OS X, ICON mixing console, HD Accel Card, Pro Tools 6.4, and Pro Tools M-Powered.

- Designed feature test plans, evaluation methodology, and resource and equipment estimates.
- Developed extensive internal white papers and performance standards specifications, described by management as “the single greatest collection of intellectual property describing how Pro Tools works.”
- Participated in software and hardware feature specification.
- Engineering technical lead at major tradeshow (AES, NAMM, NAB).

**Co-inventor/Product Manager of AcoustiLock,** Noren Products, Menlo Park, CA 2000 – 2003

Co-creator of AcoustiLock noise reduction cabinets, used to provide world-class computer and equipment noise isolation in recording studios, post-production facilities, and equipment rooms.

- Supervised product design and management from idea conception through productization, including product launch, market research, competitive analysis, branding, advertisement, trade shows, and customer service. Lifetime sales exceeding \$1,000,000.
- Acoustics research and design consultation for ultimate noise reduction capabilities.

**Recording and Mixing Engineer,** San Francisco, CA January 2001 - Present

Provide music production services include recording, editing, and mixing.

- Extensive use of Pro Tools HD, Ableton Live, Propellerheads Reason, Apple Logic, and over 150 plug-ins and virtual instruments.
- Credited on 16 albums.

**Composer and Music Supervisor,** Globalstage Productions, San Francisco, CA 2000 - 2003

Composer, arranger, and recording engineer for independent films and children’s videos. Scores include *The Man who Corrupted Hadleyburg*, *How Much Land Does a Man Need?*, *An Enemy of the People*, and Carl Djerrasi’s *An Immaculate Misconception*.

**Internships for Quantum Corporation, Cakewalk Music Software, Cornell University Electrical Engineering, and Excel (Lucent Technologies).**

## Publications

Schultz C., Loviscach J., Mathur S., and LeBoeuf J. "A Brief Anatomy of Graph-Based User Interfaces." 2008. (124<sup>th</sup> Audio Engineering Society Convention)

Bitzer J., LeBoeuf J., Simmer U. "Evaluating perception of salient frequencies: Do mixing engineers hear the same thing?" 2008. (124<sup>th</sup> Audio Engineering Society Convention)

Bitzer J., LeBoeuf J. "Automatic detection of salient frequencies." 2009. (126<sup>th</sup> Audio Engineering Society Convention)

## Patents

Automatic Labeling and Control of Audio Algorithms by Audio Recognition. US 2011/0075851 A1

## Courses (lecturer), Workshops, and Panels

"The Mobile Generation of Music Creation and Production." 131<sup>th</sup> AES Convention.

"New Technologies for Musical Self-Expression." San Francisco Music Tech Summit #9.

"Semantic Audio Success / Commercial Applications Of Semantic Audio Analysis." 129<sup>th</sup> AES Convention.

"Intelligent Audio Systems: Music Information Retrieval (Year 4)." CCRMA Summer Workshop, Stanford University. June 27 – July 1, 2011.

"Intelligent Audio Systems: Music Information Retrieval (Year 3)." CCRMA Summer Workshop, Stanford University. July 12 – July 16, 2010.

"Industry panel on audio technology." CCRMA, Stanford University. April 12, 2010.

"Interacting with Semantic Audio—Bridging the Gap between Humans and Algorithms." 127<sup>th</sup> AES Convention.

"Music Information Retrieval." CCRMA Summer Workshop, Stanford University. June 29 – July 3, 2009.

"Industry panel on audio technology positions." CCRMA, Stanford University. March 31, 2009.

"Music Information Retrieval." CCRMA Summer Workshop, Stanford University. July 21 - August 1, 2008.

"Analyzing, Recommending, and Searching Audio Content - Commercial Applications of Music Information Retrieval." 125<sup>th</sup> AES Convention.

"Intelligent Audio Systems: A review of the foundations and applications of Semantic Audio Analysis and Music Information Retrieval." 124<sup>th</sup> AES Convention.

## Press

For full listing: <http://www.imagine-research.com/press>

Interviewed major media and online publications including Bloomberg Businessweek, NSF Science 360, MSNBC, San Francisco Chronicle, Popular Mechanics, PhysOrg, Quest, Science Daily, Product Design and Development, Science Newline, e! Science News, Computing Now, Journal of the AES, Modulate This!

## Professional Affiliations

Member, Audio Engineering Society (AES)

Vice-chair, AES Technical Committee on Semantic Audio Analysis

Technical Reviewer International Society of Music Information Retrieval, ISMIR, 2009

## University-Industry Demonstration Partnership

### Technical Skills

Programming: MATLAB, C/C++. Experience with Java, SQL, UNIX, HTML.

Research: Music information retrieval, semantic audio analysis, audio signal processing, machine learning.

Audio Production: Pro Tools HD, Ableton Live, Propellerheads Reason, Apple Logic, Celemony Melodyne.

Video Production: Avid Media Composer / Xpress DV, Pinnacle Studio, Apple Final Cut Pro.

### Distinctions / Awards

Lecturer at Stanford University's Center for Computer Research in Music and Acoustics (CCRMA).  
U.S. National Science Foundation SBIR (Small Business Innovation Research) Phase I and Phase II Grant Awards.

AES Education Foundation Award for Graduate Studies, 2000.

Member of Digidesign engineering during Grammy and Oscar winning years. (Grammy Technical Award from the Recording Academy in 2001 and an Academy Award for Scientific and Technical Merit from the Academy of Motion Picture Arts and Sciences in 2003.)

### Guest Lectures

"Making your algorithms 'wicked smart': An introduction to audio analysis and machine learning" CCRMA, Stanford University, November, 2008.

"What Do Next Generation Music Producers Really Need?" Cogswell Polytechnical College, January, 2008.

"What Do Next Generation Music Producers Really Need?" Insider's Day, Expression College for Digital Arts, January, 2008.

"Machine Learning," Avid Technology, Fall, 2007.

"The Future of Music Production," Advanced Audio Production, New York University, Fall, 2007.

"Human-Computer Interface Considerations in Music Production," Human-Computer Interface Technology, Princeton University, Fall, 2007.

"The Future of Music Production – Concentrating on perceptual control and visualization of music," Music Perception and Cognition, CNMAT, UC Berkeley, Fall, 2007.

"Your role in the Future of Music Production," Fundamentals of Computer Music, CCRMA, Stanford University, Fall, 2007.

"Haptics Considerations in Professional Audio Production," HCI Theory and Practice, CCRMA, Stanford University, Fall, 2006.

"The Future of Music Production - breakthrough HCI developments, as well as bold predictions on where signal processing can take us," Fundamentals of Computer Music, CCRMA, Stanford University, Fall, 2006.

"Rhythmic Quantization of Audio," Berklee College of Music, Spring, 2000.

### Continued Education

Dawnbreaker Commercialization Planning Program: Market analysis, IP and competitive analysis, product development and licensing strategy, July 2009 – January 2010.

Research commercialization: intellectual property, licensing, and technology transfer. 12-week course. National Council of Entrepreneurial Tech Transfer. June 18 - September 3, 2009.  
Audio Engineering Society Conferences, 2005 - 2011.  
9<sup>th</sup> Int'l Conference on Music Information Retrieval (ISMIR), Philadelphia, September, 2008.  
6<sup>th</sup> Meeting of the University-Industry Demonstration Partnership (UIDP): The Changing Face of Innovation, Irvine, June, 2008.  
SanFran MusicTech Summit, 2008-2011.  
Seminar in Intellectual Property management, InfoComm.  
National Association of Broadcasters (NAB), 2000-2011.  
National Association of Music Merchants (NAMM) Winter Show, 2000-2011.  
Digital Signal Processing: Spectral and Physical Models Summer Workshop. Stanford University.  
Avid 101: Media Composer Editing, Bay Area Video Coalition (BAVC).  
Avid 110: Introduction to Media Composer Effects, BAVC.  
Avid 201: Advanced Techniques for Media Composer, BAVC.  
Avid 305: Advanced Media Composer Effects, BAVC.  
Video Production Workshop (Pre-Production, Engineering, Lighting, Sound, Camera, Final Cut Editing), BAVC.  
Apple Logic Audio 7, BAVC.  
Propellerheads Reason, BAVC.

### Music Performance Highlights

Music played on ABC Family Channel series "Knock First", 2003.  
Performance (drums) with George Clinton and P-Funk, Icon Super Club, Palo Alto, CA, 2001.  
Arranged, performed, and recorded orchestral percussion arrangement of Dream Theater's "A Change of Seasons." Premiered as an opening song during Dream Theater's Fall 2001 tour.  
Studied keyboard performance with Jordan Rudess (Dream Theater, Dixie Dregs), Summer, 2000.  
Stanford Jazz Combos (drums), 1999-2000.  
Yeltsin Collective (drums), 2000-2002.  
The Drew Baglino Quartet (drums), 2000-2001.  
Performed with McCoy Tyner, 1997, Cornell University.  
Performed with Steve Turre, 1996, Cornell University.  
Cornell Jazz Ensemble (drums and percussion), 1995-1998.  
Cornell Jazz Combo (drums), 1995-1998.  
Kaizer Soze (drums, percussion, keyboards), 1995-1999, 2009.

### Music Performance Credits

Bento, *Absent without Leave*, 2004.  
Drums on tracks 1, 3, 7, 9.  
Picnic, *The Second Coming*, 2000.  
Piano and organ on "Quicksand."  
Kaizer Soze, *More Common than Smith*, 1999.  
Drums and keyboards.  
Kivuli, *Everyone's a Critic*, 1999.  
Drums on tracks 1-6.

### Recording and Mixing Credits

The Wearies, *Stereo Lust*, 2007.

Tab to Transients, "Jingle Cats Remix." *Digidesign Holiday Album*, 2007.

Keyboards, drums, recording and mixing.

The Kevin Riley Experiment, *Poppin Always*, 2006.

Atticus Finch, *Ends and Means* (EP), 2005.

DJ Chas, *Saturday Party Mix*, 2005.

Carin, *Video releases / promotional videos*, 2004.

Jay, Joe & Greg, "The Christmas Rush - a Rush-inspired tribute to Christmas."

*Non-Denominational Winter Celebration Man*, 2004.

Atticus Finch, *Everywhen*, Earthology Records, 2003.

Jay LeBoeuf, "Deck the Halls." *A Silent Night at the Opera*, 2003.

Keyboards, drums, recording and mixing.

Tab to Transients, "Drummer Boy Goes to War." *Gingerbread Manhem - 2002 Digidesign Holiday Album*, 2002. Drums, percussion, production and mixing.

Jay LeBoeuf, "Deck the Halls." *Gingerbread Manhem - 2002 Digidesign Holiday Album*, 2002.

Performed "computer/PC keyboards" used as melodic percussion.

Jay LeBoeuf, "Deck the Halls." *Seasonally Lickered - 2001 Digidesign Holiday Album*, 2001.

Jay LeBoeuf, "Christmas Time is Here." *Digidesign Christmas Album*, 2000.

### Film Scoring / Music Supervisor Credits

Presidio Golf Course and Presidio Café (commercials), 2010.

Music supervisor and editor.

String Quartet Music for unaired Martha Stewart Living documentary segment, 2004.

Composer, Keyboards.

*An Enemy of the People*, Globalstage Productions, 2003.

Music Supervisor, Recording and Mixing Engineer.

*How Much Land Does a Man Need?* Globalstage Productions, 2001.

Music Supervisor, Recording and Mixing Engineer

*The Man That Corrupted Hadleybug*, Globalstage Productions, 2001.

Composer, Recording and Mixing Engineer.

*An Immaculate Misconception*, Globalstage Productions, 2000.

Composer, Keyboards, Drums, Recording and Mixing Engineer.

*An Immaculate Misconception*, Adapted for live audience performance, 2000.

Music Director/Composer.

### Volunteering

Susan G. Komen Race for the Cure

American Cancer Society, Relay for Life

Music in Schools Today

Occupational Specialist (Music and Sound Arts), Accrediting Commission of Career Schools and Colleges of Technology (ACCCSCT)