

Jay LeBoeuf

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Curriculum Vitae

Summary

Forward-thinking, market-oriented entrepreneur and research engineer with a proven history of driving product innovation through a unique blend of internal applied research and academic/industry collaborations. Expertise in leading development of next-generation signal processing, machine learning, and human-computer interface technologies for consumer and professional audio/video creation, editing, and production markets. Comprehensive knowledge of audio and music technology product landscape and technologies.

Education

Stanford University, Stanford, CA, June 2000

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

Cornell University, Ithaca, NY, May 1999

Bachelor of Science in Electrical Engineering with a concentration in digital signal processing. GPA 3.3.

Professional Experience

Founder/Chief Technology Officer, Imagine Research, San Francisco, CA January 2008 – present
Manage an applied research company specializing in development of next-generation technologies for the consumer and professional audio/music production markets.

- Provide research and development services for music information retrieval, audio signal processing, and machine learning algorithms.
- License and broker audio technologies for leading universities, also providing technology search services for companies.
- Develop strategic business plans, market analysis, and funding opportunities for university spin-off companies.
- Direct large-scale university research collaborations.

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. (124th Audio Engineering Society Convention)

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

Bitzer J., LeBoeuf J. “Automatic detection of salient frequencies.” 2009. (126th Audio Engineering Society Convention)

Courses (lecturer), Workshops, and Panels

“Interacting with Semantic Audio—Bridging the Gap between Humans and Algorithms.” 127th 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.” 125th AES Convention.

“Intelligent Audio Systems: A review of the foundations and applications of Semantic Audio Analysis and Music Information Retrieval.” 124th AES Convention.

Press

“Searching, Analyzing, and Recommending Audio Content”. Rumsey, Francis. Journal of the Audio Engineering Society, Volume 57 Issue 3, pp. 166-169. March 2009.

Professional Affiliations

Member, Audio Engineering Society (AES)

Vice-chair, AES Technical Committee on Semantic Audio Analysis

Member, AES Technical Committee on Studio Practices and Production

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

University-Industry Demonstration Partnership

Technical Skills

Programming: MATLAB, C/C++. Experience with Visual BASIC, HTML, Lisp, UNIX, Java, PD, MAX/MSP.

Machine learning: Weka Machine Learning and Data Mining Toolbox, Netlab Pattern Recognition and Clustering Toolbox, libsvm SVM Toolbox.

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

National Science Foundation SBIR (Small Business Innovation Research) Phase 1 Grant Award, July – December, 2009.

AES Education Foundation Award for Graduate Studies, 2000.

Member of Digidesign engineering during award-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

Research commercialization: intellectual property, licensing, and technology transfer. 12-week course. National Council of Entrepreneurial Tech Transfer. June 18 - September 3, 2009.

125th AES Conference, San Francisco, October, 2008.

9th Int’l Conference on Music Information Retrieval (ISMIR), Philadelphia, September, 2008.

6th Meeting of the University-Industry Demonstration Partnership (UIDP): The Changing Face of Innovation, Irvine, June, 2008.

124th AES Conference, Amsterdam, May, 2008.

SanFran MusicTech Summit: January 2008, October 2008, and May 2009.

National Association of Music Merchants (NAMM) Winter Show, 2000-2009.

Digital Signal Processing: Spectral and Physical Models Summer Workshop. Stanford University. Seminar in Intellectual Property management, InfoComm.

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.

AES Conference, San Francisco, October, 2004. Workshop in Acoustics; Workshop in Audio Post Production.

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.

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 Credits

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

Composer, Keyboards.

An Enemy of the People, GlobalstageProductions, 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

Melanoma Research Foundation

Music in Schools Today

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