

Benjamin K. Reaves

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Engineering Research Manager experienced with speech recognition & automotive applications.

Awards, patents, papers, prototype and product development; engineering management experience in USA and Japan.

Cross-cultural communication, statistical modeling, Python, Perl, Microsoft Office, Audio engineering, data collection.

I love to put research results to work!

Awards **US patents** in speech detection and recognition, multiple sensors, interactive systems (7 patents granted)*
ATR Software Award: ATR-Matrix Speech Translation System, first networked speech-to-speech translator
Japanese Language Proficiency 日本語能力試験 2級 (Level 2 of 4; 1 is best) JLPT

Papers* An adaptation of Attribution in Between In-vehicle Device and a Driver.自動車技術会(SAE-Japan), 2009
Don't Blame me, I am only the Driver: Impact of Blame Attribution on Attitudes and Attention to Driving, 2004
ATR-Matrix: Implementation of a Speech Translation System (Acoustical Society of Japan. First author)
A Robust Algorithm for Word Boundary Detection in the Presence of Noise (full paper, refereed journal)

Oracle Corporation, Redwood City, USA. Contract via Randstad MSP, VA, USA. 2011 - present

- Architecture and development of speech recognition prototype similar to Siri for Oracle front end.

TOYOTA infoTechnology Center, USA, Mountain View. **Research Manager**, Technical R&D. 2003-2011.

- As Research Manager, communicated directly with upper management in Japan and USA, applied Open Innovation principles by managing collaborations with universities across the USA and Europe, and managed a small team of Engineers and Researchers in California, resulting in strategic relationships and concrete prototype systems.

Technologies included: speech recognition, statistical language modeling, machine learning; intention detection, driver status detection by multiple sensor fusion; assessment of driver drowsiness, distraction, and general health. Our prototype prediction of driver danger, trained on highly lopsided data, was chosen by our parent company for demonstration at many levels all the way up to Akio Toyoda.

- As Senior Researcher in the Advanced Research Group, reported directly to VP (Japan) and Senior Advisor (USA), recommending strategic new business areas based on emerging technologies and new fields including a novel navigation system to optimize multiple fuel sources for overall efficiency.
- Our small group was the company's most productive as measured by patents granted and papers* accepted.

Stanford University & Dejima Inc. San Jose, California. **Independent Contractor** 2001-2002.

- Negotiated and won contracts with Oracle and Toyota. Designed and built mobile Speech Accessor to database query system for small businesses. Used SRI Language Modeling software, Dynaspeak, and Agent Technology from Dejima when their VP was Adam Cheyer who later founded Siri.

Nuance Communications, Menlo Park, California. Software Engineer for telephone IVR 1999-2001.

- Member of Michael Cohen's Dialog Research group, executing product release with focus on reliability. Evaluated software performance on applications deployed using an cloud-based model to share with all developers. Used CGI and HTML to show results in real time, and summarize on corporate intranet for on-demand presentation.

Advanced Telecommunications Research Laboratory, Seika, Kyoto, **Japan. Invited Engineer.** 1995-1999.

- Managed multi-national team that designed, built, and deployed the world's first speech translation system.

Panasonic Speech Technology Laboratory, California and Osaka. **Research Engineer.** 1985-1995.

- Developed speech recognition prototypes for evaluation of advanced algorithms in real-world use cases.

Earlier experience includes Digital hardware design of robust spread-spectrum modem, secret clearance, and development of a speech interface to a stenotype, that enabled patients to speak naturally.

Bachelor of Science in Electrical Engineering, University of Southern California

Master of Science, Electrical Engineering. specializing in Statistical Signal Processing – Stanford University.

Member Institute of Electrical and Electronic Engineers; Silicon Valley Forum, Automotive User Interface conference, Acoustical Society of American and of Japan. Native speaker of American English. U.S. Citizen.

