Résumé

Objective

Apply 12+ years of research and commercialisation experience to develop and improve state-of-the art machine-learning research algorithms and turn them into useful, reusable code that can make life easier for researchers, engineers, and the wider public.

Personal Particulars

Name **Dr David Brendan DEAN** **dbdean.com**

Address 379 Milton Rd, Auchenflower, Queensland, Australia
(willing to relocate internationally or work remotely)

Telephone +61 407 151 912

Email ddean@ieee.org

Technical Background

Wink Health *September 2016 to present* winkhealth.com

Employee #1, Data Scientist

Research, implementation, and integration of signal processing and machine learning algorithms into production systems for the detection of abnormal sleep patterns from smart-phone applications.

- Developing an evaluation framework, and designing and deploying an associated distributed processing Docker-based AWS cluster to evaluate signal processing and machine-learning algorithms for abnormal sleep detection.
- Investigating novel techniques for sleep sound and abnormal event detection.
- Integration of signal processing and machine-learning techniques into production API for use in customer-facing applications.

Queensland University of Technology *February 2004 to present* qut.edu.au/research/saivt

Senior machine learning researcher at the Speech, Audio, Image and Video Technology (SAIVT) Laboratory

Visiting Senior Research Fellow

Senior Research Fellow (prior to July 2016)

Research Fellow (prior to 2014)

Supervision of PhD students and junior post-docs and conducting novel research over a wide range of ARC, CRC and industry supported research areas, including:

- Developing novel techniques for and commercial implementation of speaker diarisation across court recordings (government and industry funded)
- Improving the performance of speaker recognition approaches in short and mismatched enrolment and verification conditions (gov. and industry funded)
- Organising the collection of real-world databases for the evaluation and development of audio and/or visual speech processing algorithms (gov. funded)

Selected Industry and Academic Research Partners

AutoCRC ▪ Smart Services CRC ▪ ValidVoice ▪ NSSTC/DST ▪ Auscript ▪ For The Record ▪ University of Avignon ▪ Radboud University ▪ Universidad Autónoma de Madrid ▪ DevAudio

Teaching

Development, presentation and assessment of lecture, tutorial, assignment and examination material.

Clockwork Computing *May 1999 to February 2004*

Résumé

Academic Background

Queensland University of Technology — *Feb 1999 to present (visiting since July 2016)*

Publications

529 citations across 70+ publications, with 18 publications having more than 10 citations, and a h-index of 13.

Full list available at *bit.ly/ddscholar*.

Publication Venues

Speech Communication ▪ Computer Speech and Language ▪ IEEE Transactions on Audio, Speech and Language Processing ▪ International Conference on Acoustics Speech and Signal Processing (ICASSP) ▪ Interspeech ▪ Auditory-Visual Speech Processing (AVSP)

PhD Supervision

Visual Recognition of Human Behaviour in Noisy Environments — *Rajitha Navarathna (2009–2013)*

Robust Automatic Speaker Linking and Attribution — *Houman Ghaemmaghami (2010–2013)*

Speaker Recognition Using I-Vector Features — *Ahllan Kanagasundaram (2010–2014)*

Improving Spoken Term Detection Using Complementary Information — *Shahram Kalantari (2011–2015)*

Domain Adaptation for Speaker Attribution — *MD Hafizur Rahman (2014–2017)*

Speaker Recognition in High Noise Environments — Ahmed Kamil (2014–2017)

Multimodal Emotional Recognition Using Deep Learning — Dung Nyugen Tien (2015–2018)

Doctor of Philosophy — *February 2004 to March 2008*

Synchronous HMMs for Audio-Visual Speech Processing

Investigating novel approaches to the training and testing of synchronous HMMs for modelling audio-visual speech and speaker recognition.

Bachelor of Information Technology (with Distinction)
Bachelor of Engineering – Electronics (First Class Honours) — *February 1999 to November 2003*

GPA of 6.425 (on a 1 to 7 scale, 7 being highest)

High Distinction or Distinction on 85% of subjects

Professional

Memberships — IEEE ▪ ISCA ▪ ASSTA ▪ OSMF

Technical Review Committees — Interspeech ▪ ICASSP ▪ SST ▪ Speaker Odyssey ▪ IEEE Transactions on Multimedia ▪ IEEE Transactions on Audio, Speech and Language Processing ▪ Computer Speech and Language ▪ Speech Communication

Invited Speaker — SLAM 2015 (keynote) ▪ Biometrics Institute ▪ Auto CRC ▪ Smart Services CRC

Technical Experience

Research — Audio-visual speech ▪ Speaker recognition ▪ Speaker diarisation ▪ Speech activity detection ▪ Image processing ▪ Reproducable research code ▪ Releasing research databases

Software Engineering/DevOps — Project Managment ▪ Research Commercialisation ▪ C/C++ ▪ Python ▪ Shell ▪ MATLAB/Octave ▪ Javascript ▪ HTK ▪ Git ▪ Django ▪ PostgreSQL ▪ MySQL ▪ Docker ▪ Linux ▪ Amazon Web Services ▪ Grid Engine/PBS