

Tony Bruguier

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<https://www.bruguier.com> US & EU citizen

Education

California Institute of Technology ([Caltech](#)): PhD, Electrical Engineering

Encoding of Financial Signals in the Human Brain (<https://www.bruguier.com/thesis.html>)

Themes: Analysis of fMRI, inferential statistics with multiple comparisons, neurobiology, and behavioral economics. Graduated with 4.0 GPA

[ESIEE](#), Paris: *Diplôme d'Ingénieur*, major in signal processing

Graduated valedictorian

Professional experience

[Google AI](#)

Automatic speech recognition (ASR) and text-to-speech (TTS) (Nov. 2014 - present)

Design machine learning algorithm for pronunciation learning ([paper](#)) and implemented in prod

Created log mining pipeline that learns pronunciation of misrecognized words

Near real-time new pronunciation learning from users' actions ([paper](#))

Neural network based language models ([paper](#))

Acoustic model size reduction (LSTM-CTC neural network or other) for embedded ASR ([paper](#))

Personalized Search Engineer (Oct. 2013 – Nov. 2014)

Natural Language Processing of Gmail messages

Detection of event date and times

Productionization at scale, to process messages at near real-time

Released Google Now card ([official blog post](#))

Search quality evaluation (Febr. 2012 – Sept. 2013)

Offline analysis of the performance and accuracy of the search engine results

Implementation of analysis for continuous evaluation

Mapreduce and distributed system coding

Languages used: C++, R, Matlab, Java, and Python (for TensorFlow)

OSC Solutions (1 summer)

First employee at startup

Setup startup company's IT infrastructure (Setup LAN, Source Control Server)

Used Java/WebObjects to create prototype for Enterprise Resource Planning (ERP) program

Languages used: Java, SQL, Unix scripts

Research and publications

Several peer-reviewed articles, patents, and other publications

See: <https://www.bruguier.com/research.html>