Tony Bruguier

Machine Learning engineer

Milpitas, CA - Email me on Indeed: indeed.com/r/Tony-Bruguier/0a3a8aa1397042d6

Authorized to work in the US for any employer

WORK EXPERIENCE

Software Engineer

Google Search - January 2012 to Present

Unification of TTS and ASR pronunciations
Research in automatic pronunciation learning from audio data
Acoustic model size reduction (LSTM-CTC neural network or other) for embedded ASR

Personalized Search Engineer

- October 2013 to November 2014

Natural Language Processing of Gmail messages
Machine learning for triggering (SVM, logistic regression, decision trees)
Detection of event date and times (US Patent under review)
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, and Java

Summer intern in automatic medical diagnostic

Brion Technologies - November 2007 to January 2012

computational lithography) (Nov. 2007 - Jan. 2012)
Model R&D
Created a Lua-scriptable EDA tool (Electronic design automation) for mask creation
Creation of a gauge selection algorithm to lower cost of metrology (US Patent granted)
Created and implemented new model for resist process (US Patent granted)
Estimation of fitting and prediction power, overfitting mitigation, and stability
Wrote both FFTW and FPGA accelerated code
Languages used: C++, Lua, and Matlab
Philips Medical Systems (3 summers)
Summer intern in automatic medical diagnostic
Improved on automated EKG interpretation algorithms for cardiographs
Created proprietary vectorcardiography algorithm for measurement of QRS-T loops
Measured effect of in-house lead transformation algorithms on diagnostic performance
Wrote denoising and onset/offset detection algorithms using wavelets
Wrote optical waveform recognition algorithms
Wrote EKG marking program for the rest of the team
Languages used: C++, C#, Basic, Matlab Unix scripts

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

More: http://www.bruguier.com/professional.html

EDUCATION

PhD in signal processing

California Institute of Technology

LINKS

http://www.bruguier.com

ADDITIONAL INFORMATION

Skills and interests
Scientific skills Foreign Languages
Extensive knowledge of signal processing French (fluent), Spanish (basic), Mandarin
Fourier transform, Wavelets (beginner)
Information theory
Dynamic programming Self-taught programming languages
Graph theory C (Middle school)
Probability models C++ (High school)
Optimization, numerical analysis PPC assembly (College)
Descriptive and inferential statistics PHP and MySQL, LAMP stack (College)
Numerical optimization
Data analysis, regression Self-taught basics of number theory and
Linear algebra cryptography (College)
Financial economics

More: http://www.bruguier.com/other.html and http://twitter.com/bruguier

Free time: hiking, swimming, and rock climbing

Research and publications
Several peer-reviewed articles, patents, and other publications
See: http://www.bruguier.com/research.html