

André Natal

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Summary

André is a multi-awarded software engineer with over 20 years of experience in developing, architecting, managing and maintaining large software projects, having worked in various segments of the economy, such as the internet, legal/government, television networks, oil & gas, hardware, finance, and mobile.

Possesses knowledge of various technologies and platforms such as distributed computing techniques for high-performance development for smartphones, software architecture, databases, network, and communication protocols, web, and especially speech and conversational-based applications and intelligent agents by utilizing artificial intelligence and machine learning techniques

Has focused the last years on the following:

- Speech Recognition and Synthesis
- Natural Language Processing
- Deep Learning
- Machine learning for intelligent agents
- Internet of Things
- Mobile and embedded applications
- Streaming Media
- VoIP
- Distributed Computing and Messaging
- Low Latency
- WebRTC

Experience



Principal AI and ML Engineering Leader

Gather

Jul 2023 - Present (2 months)

Building the next generation of personalized personal agents using LLMs and cutting edge machine learning technologies.



Staff Machine Learning Engineer

Mozilla

Apr 2015 - Jul 2023 (8 years 4 months)

I'm building deep-learning-based tools and applications for the entire range of Mozilla products.

Built: Firefox Translations, Common Voice, Voice Fill, Deep Speech, Web Speech API, Firefox Reality, Web of Things Gateway, Firefox Voice, Firefox OS, Vaani, among others.



Senior Speech Engineer

Mozilla

Apr 2015 - Sep 2018 (3 years 6 months)

Mobile and Speech Software Engineer

alSys

Jan 2013 - 2015 (2 years)

As an independent contractor, I built speech and audio-enabled mobile and IVR applications.

- Creator of Asics Perfect Pace, an iOS app awarded more than twenty times worldwide, including Cannes Lions.
- Developed a full stack speech-enabled IVR solution integrating Asterisk, UniMRCP, and Kaldi that handles millions of phone calls monthly.

Speech Software Engineer

Verbio

Jan 2013 - Nov 2014 (1 year 11 months)

Doing pre-sales engineering by supporting the sales team and developing multiple speech applications like:

- Mobile virtual assistants
- Speech-enabled IVRs with natural language processing
- Android speech SDKs
- Voice biometrics iOS apps
- Mobile VAD algorithms
- Designed, developed, and maintained São Paulo's IVR, handling nearly a million phone calls monthly.

Managing Partner

All Apps

Dec 2010 - Dec 2012 (2 years 1 month)

Innovative apps for any device. From TVs to Tablets. From smartphones to the web. Architected & developed award-winning smartphone apps for iOS, Android, Windows Phone, and FirefoxOS using speech interfaces, real-time audio processing, Geo-location, and more.

Senior Software Engineer

UBS

2010 - 2010 (less than a year)

Electronic Trading Development. Developed order routing systems for high-frequency trading that were fully FIX compliant; algorithmic trading solutions for derivatives; real-time proprietary quotes APIs enabling clients to build in-house strategies; drop-copy servers; real-time integration with risk analysis systems via messaging queues.

Senior Software Engineer

SystemGPS

2008 - 2010 (2 years)

Planned, architected, and developed a range of GPS-based products like speech-enabled IVRs, SMS chatbots, instant messaging gateways, real-time web-based tracking applications, server applications that communicated with GPS trackers on cars, infrared access-control systems, and microcontroller-based applications.

Senior Software Engineer

Credit Suisse Brasil

2008 - 2008 (less than a year)

I worked performing Algorithmic Trading development for the trading desk.

Migrated critical applications from DDE spreadsheets to high-frequency, multi-threaded, low latency c++-based application suite connected to the exchange through FIX protocol.

Senior Software Engineer

CMA Mercados

2007 - 2008 (1 year)

I participated in creating the company's first derivative AlgoTrader solution. I have also developed a real-time web-based trade system for HSBC bank that provides trading, quotes, book offers, news, and charts.

Senior Software Engineer

B3

2006 - 2006 (less than a year)

I worked as a contractor from 7Comm for Bovespa to build an API that allows brokerage firms to integrate their order management systems to submit orders to the public collateral loan exchange.

Senior Software Engineer

Globo

2005 - 2006 (1 year)

Microsoft contracted me to develop a Windows Media Server addon certified by them to prevent the video content from unauthorized access. I also developed tools using WMS SDK for monitoring, metrics, and health checking the streams.

Senior Software Engineer

Microsoft

2004 - 2005 (1 year)

I worked as a consultant on a Microsoft Consulting Services project inside São Paulo's court of justice to migrate their systems from legacy technologies to a complete web-based .net solution.

Senior Software Engineer

Bechtel Corporation

2003 - 2004 (1 year)

I developed Windows CE mobile applications that enabled engineers to collect and process data daily from routine unit tests made at Petrobras Refap Oil & Gas plant.



Software Engineer

Webmotors

2000 - 2003 (3 years)

I was a team member at the famous Brazilian vehicle web portal when it was only a startup.

I was a full-stack engineer, developing new features for their websites, desktop applications, and large-scale databases.



Software Engineer

MTV Brasil

1999 - 2000 (1 year)

I worked on website development and the creation of interactive TV shows. The team won multiple awards due to its innovative use of interactive programs when resources were scarce, and bandwidth was narrow. Using WAP, we also built the country's first mobile internet portal from a television channel.



Software Engineer

DPTO Propaganda

1999 - 1999 (less than a year)

Multimedia web development using Flash and Javascript.

Education



Stanford University

SCPD, Artificial Intelligence, Computer Science

2020 - Present

XCS224N - Natural Language Processing with Deep Learning. Instructor: Chris Manning

XCS224U - Natural Language Understanding with Deep Learning. Instructor: Chris Potts

XCS224W - Machine Learning with Graphs. Instructor: Jure Leskovec



Universidade Anhembi Morumbi

Bachelor's degree, Computer Science

2013 - 2015



FEI - Faculdade de Engenharia Industrial

Dropout, Engineering

Jun 1998 - Jun 1999

Licenses & Certifications



Microsoft Certified Professional - Microsoft



Google Summer of Code Alumni - Google



XCS224U - Natural Language Understanding - Stanford Online



XCS224N - Natural Language Processing with Deep Learning - Stanford Online



Artificial Intelligence - Stanford Online



XCS224W - Machine Learning with Graphs - Stanford Online

Skills

Software Development • Web Development • Scrum • Android • Linux • Embedded Systems •
Mobile Applications • Sistemas distribuídos • SQL • JavaScript

Honors & Awards



Cannes Lions Festival - Cannes Lions Festival

Jul 2012

ASICS Perfect Pace - Finalist



El Ojo de Ibero America - El Ojo de Ibero America

Nov 2013

ASICS Perfect Pace , GOLD at Mobile

<http://www.elojodeiberoamerica.com/finalistas-y-ganadores-2013/ganadores-el-ojo-mobile-2013/>



Speaker at Fisl 2014 - <http://softwarelivre.org>

May 2014

SpeechRTC and FirefoxOS - Cross Browser speech recognition for the Opeb Web

<https://www.youtube.com/watch?v=zXp7bS6CkpE>



Software Developer - iBest

2000

Winner on ten categories



The New York Festivals International Advertising Awards - The New York
Festivals International Advertising Awards

2014

DIGITAL: Interactive Applications

<http://advertising.newyorkfestivals.com/winners/5110/>



The New York Festivals International Advertising Awards - The New York
Festivals International Advertising Awards


2014

DIGITAL: Craft

<http://advertising.newyorkfestivals.com/winners/5046/>

 **Wave Festival, 2014 Cyber Digital Out of Home BRONZE** - Wave Festival, 2014
Cyber Digital Out of Home BRONZE
2014
ASICS Perfect Pace


<http://www.wavefestival.com.br/cobertura/2014/wavefestival/premiados/cyber.html>

 **Wave Festival, 2014 Mobile Melhor uso de Tecnologia BRONZE** - Wave Festival,
2014 Mobile Melhor uso de Tecnologia BRONZE
2014
ASICS Perfect Pace

<http://www.wavefestival.com.br/cobertura/2014/wavefestival/premiados/mobile.html>

 **Wave Festival, 2014 Mobile Aplicativos Silver** - Wave Festival, 2014 Mobile
Aplicativos Silver
2014
ASICS Perfect Pace


<http://www.wavefestival.com.br/cobertura/2014/wavefestival/premiados/mobile.html>

 **El Sol.** - El Sol. El Festival Iberoamericano de la Comunicación Publicitaria
2014
ASICS Perfect Pace - Sol de Plata

<http://elsolfestival.com/palmares/edicion-2014/detalles/?ref=783&idm=19>

 **Prêmio Colunistas Propaganda São Paulo** - Prêmio Colunistas Propaganda São
Paulo
2013
ASICS Perfect Pace

http://www.colunistas.com/anos/pc2013/sp/html/pc2013sp-pr_digital-premiados.html

 **One Show 2014 Interactive** - The One Club - One Show 2014 Interactive Mobile
Applications/Sites / Services/Utilities Merit Pencil
2014
One Show

http://www.oneclub.org/#olmag=/_ajax/archive/?action=arc_work%26value=21506

 **Speaker at Mobile Voice Conference 2015 - San Jose**

Apr 2015


 **Festival ABP - Associação Brasileira de Propaganda**

2014

ASICS Perfect Pace

Grand Prix Mobile

<http://abp.com.br/?wpdmact=process&did=NDEuaG90bGluaw==>

 **Festival ABP - Associação Brasileira de Propaganda**

2014

ASICS Perfect Pace

LÂMPADA DE OURO MOBILE

Aplicativos Mobile

<http://abp.com.br/?wpdmact=process&did=NDEuaG90bGluaw==>

 **Festival ABP - Associação Brasileira de Propaganda**

2014

ASICS Perfect Pace

LÂMPADA DE OURO MOBILE

Melhor Uso da Tecnologia

<http://abp.com.br/?wpdmact=process&did=NDEuaG90bGluaw==>

 **The 20 most influential Latinos in tech, 2017 - CNET**

Aug 2017

<https://www.cnet.com/es/imagenes/latinos-mas-influyentes-tecnologia-cnet-2017-fotos/14/>

 **Speaker at APICon 2018, Sao Paulo**

Mar 2018

 **Open Source Rookies Of The Year - Black Duck by Synopsys**

Apr 2018

Project Common Voice

 **Speaker at Mobile Brazil Conference**

2014



Fast Company Innovation by Design Award for Common Voice - Fast Company

Sep 2018

<https://blog.mozilla.org/en/mozilla/news/fast-company-innovation-by-design-award-for-common-voice/>